COMMERCIAL CAR JOURNAL

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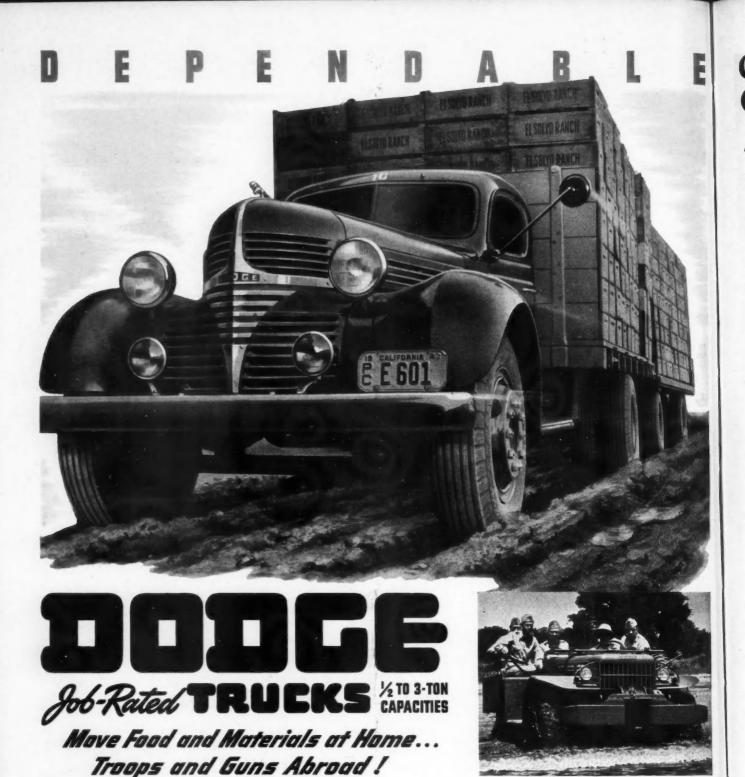
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COMMERCIAL CAR JOURNAL

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EDITORIAL CONTENTS

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FEATURE ARTICLES

"Chi" Fleets Shy Away from Women	36
Salvage Program Fills Fleet's Parts Bins	38
Checks at Door Speed Fleet's PM	40
Wartime Starter, Generator Service	44
Rolling War Goods 23 Hrs. a Day	46
Accident Prevention Promotes Conservation	49
Modernizing Shop Eases Manpower Problem	52
Consumers Help Conserve Mileage	55
OPA Used Truck Price Control	56

DEPARTMENTS

Washington Runaround	35
Free Publications	42
New Products	43
Shop & Salvage Hints	50
ODT News	59
OPA News	60
WPB News	
CCJ Newscast	70
CCJ Quiz	
Advertisers' Index	162

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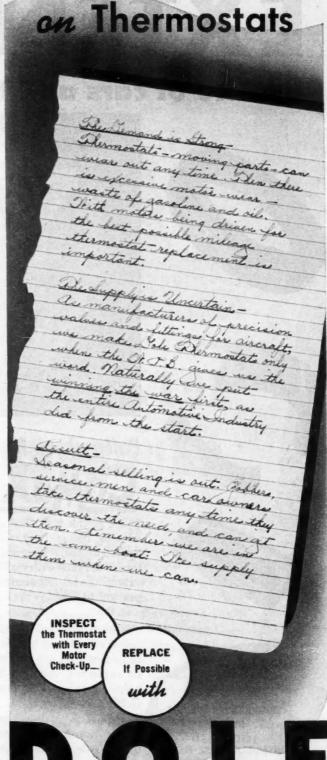
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Replacement

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DUE to the fact that no new trucks are being built, except for the armed forces, it is now more important than ever that every effort be taken to extend the period of usefulness of your present trucks.

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COMMERCIAL CAR JOURNAL

Vol. LXV

MAY, 1943

No.



While Rubber Czar Jeffers and the Office of War Information were squabbling about how the rubber situation should be reported, a rumor became current that very shortly Grade A camelback for recapping would become available to all motor trucks. This reflects Mr. Jeffers' optimism which revealed itself previously in April when retail delivery milk trucks were moved up to the "A" list of new tire eligibles, and when he said that twice as many truck tires would be available this year as last. In his tiff with OWI, Mr. Jeffers made the government information agency change a news release which painted a dark picture of the rubber situation. OWI protested that it was "telling the truth." Jeffers countered that the OWI analvsis was based on information that was out of date. He should know.

Parts Relief in Sight

Events indicate that the "parts shortage" will be greatly eased by the latter part of July or early August. WPB has eased the restrictions on parts production. It has granted 100 per cent of ODT's second-quarter claims for carbon steel, over 85 per cent for alloy steel and silico-manganese steel, and 90 per cent for copper wire. These materials will be worked up into parts during the second quarter and find their way into distribution channels during the third quarter. Federal quarters do not concede there is a general parts shortage. They admit delays in the procurement of parts but say that only axles, transmissions and gears are really critical. As if that weren't enough to lay up any truck! But relief is ahead because the automotive industry got what it asked of ODT, and ODT got what it asked of WPB.



There's a "Grade A" Coming ... Parts Relief in Sight ... Parts Pilfering Checked ... Farmers Plow-Under AA-1 Priority ... On Order: 38,000 Trucks, 16,000 Trailers ... Of V (Pennants) We Sing ... ODT Studies Speed Limit ... What's Cooking in ODT ... Surplus Coupons Invite Cops ... Man "Freeze" Thaws

RUNAROUND

by GEORGE T. HOOK, Editor

Parts "Pilfering" Checked

Parts "pilfering" by the armed services has been a serious factor affecting civilian supply. Parts have been taken right off the production line. This indiscriminate picking has been curbed. The services must now give a priority for parts taken and the

priorities are used to make up the loss to the civilian supply.

Farmers "Plow-Under" a Priority

During April most private truck operators came within an ace of being deprived of free access to replace-(TURN TO PAGE 64, PLEASE)



REGARDLESS of the fact that many Chicago trucking operators are reporting labor shortages which are becoming more and more pressing, in their need for competent drivers and shop mechanics and even dock workers, most of these operators seem to be giving little or no consideration to the use of women workers as a possible new source of labor personnel.

However, a few Chicago operators already are experimenting in the employment of women as truck drivers with reported results which are quite variable. These results include at least one apparently successful woman driver of a big highway outfit; but, in contrast, the apparent abandonment of an attempt by the strong Chicago labor union which supplied this one woman highway driver to find and train other women drivers equally as efficient. The results also include a number of reported successful women drivers of light city delivery trucks; but, likewise, contrary reports about other women hired as prospective drivers in local deliveries who proved in their tryout tests to be very unsatisfactory.

One of the first of the Chicago waremergency experiments in the use of women as drivers, was begun several months ago by a company with ten or twelve light trucks to make deliveries out from as many branch stores. They formerly relied on hiring high school youths of 17 or 18 years, experienced in automobile driving, for the combined stock room and delivery work. When it became difficult to get competent high school boys they began to advertise in Chicago newspapers for young women



The most satisfactory results experienced with women workers in Chicago is in this freight terminal where 115 young colored women work as stevedores

"CHI" FLEETS SHY

Make some use of them as drivers and as dock hands but not as mechanics.

Good results reported in few cases are offset by traits new to fleet men

by RANDALL R. HOWARD

Special GCJ Correspondent, Chicago

drivers. Company officials frankly admit that they were inexperienced in hiring women, excepting for office work. They decided to try out young married women of 21 to 31 yr., as likely to be more stable at a job mostly associating with older married men.

There were plenty of applicant responses by young married women, experienced as automobile drivers and apparently rugged enough to handle the goods to be assembled and delivered. They all took readily to the suggestion of wearing slacks; though with an eye to style. And so styled

in their slacks, there was evidence also in some cases of reluctance to jump into the naturally more soiling stock room part of the job. This attitude likely helped in the development of one of the fundamental mistakes admittedly made by the management in the initial training of some of the women drivers.

Each new woman driver was hired to work alone as the only delivery driver from an individual store. Hence, it was natural that the men should courteously offer to help the young woman to load her truck, even though the heaviest individual item



Mrs. Virginia McLean is a type that Chicago fleet operators would like to employ. She used to help her husband drive a truck and run a tire shop



A number of women are reported driving light delivery vehicles to the complete satisfaction of owners. Most expect men to help with loading

AWAY FROM WOMEN

she was supposed to handle almost never exceeded 25 to 30 lb. in weight. But some of the women expected such loading help to continue on and on, regardless of how busy the men might be at other work. Also, some of such "spoiled" women drivers disliked to take suggestions from men as to loading and delivery methods.

However, in a number of other ways the women drivers proved to be very competent. Mostly, they were careful—much less of jackrabbit starting and stopping, and the darting in and out of traffic common to the high school lads. Hence, the women drivers had fewer accidents, no trouble in traffic, and once loaded and started they made equally good average delivery time.

At first, the company officials were greeted with some kidding from customers served by the women drivers; but such kidding was soon quieted by "this is war" reminders. From the viewpoint of the women themselves, practically all of them proved courteous and well able to take care of themselves among customers.

In the total, the chief trouble with the women drivers was that many of them failed to develop a serious attitude toward their jobs. Many of

them seemed to look upon their new driving job as a lark, a personal wartime adventure. For most of them it was their first driving job; and, when once well at it, they bumped into other similar work opportunities. Hence, it was not uncommon for a woman driver to pretend personal sickness or home sickness, when in reality she was stealing time off while looking for another job which seemed to promise a little more pay per day or week. It was common also for them to quit their jobs without any sort of advance notice; and then maybe wait for days or even weeks before coming back for the final pay check being held for them. Also, as related to their home status, they often would stay away from work because of reported illness either to themselves or some other member of the family: most often they wouldn't even bother to send an advance telephone message. As a result, during the first several months of the women driver experiment, the company had an enormous labor turn-over.

Because of these experiences, the company personnel department soon learned to be much more hard boiled in hiring and training a new woman driver. The present policy with an applicant is to paint the job as nonglamourous as possible. But company officials admit that they really don't yet know how to test and rate an applicant. As an example, one of their present best drivers is a very attractive, almost-glamour type of It was young married woman. thought when she first came that she wouldn't fit, and for a dozen times they practically refused her the job. But she still persisted; pointing out that she was a widow, really needing the work to support herself and mother. As a final plea she showed them several similar driver wanted ads by competitor companies which she had clipped from a newspaper, and threatened to answer them if not given a chance to prove she could handle the job.

In a different Chicago industry—dry cleaning and dyeing—the writer talked with an official of Local Union No. 712 for drivers of that industry. He mentioned that several companies recently had been trying women drivers. In his opinion, the chief objection by the men drivers to women drivers working in the same crew, was that the women drivers of ten expected the men drivers to help

(TURN TO PAGE 100, PLEASE)

of

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Southern beverage fleet employs practically every salvage process to keep its operation supplied with replacement units for the duration



Parts salvage occupies a prominent place in this fleet's maintenance program. Here a mechanic is shown forming a spring U-bolt, on a bending machine, from salvaged round stock

by OWEN BROWN

Plant and Fleet Maintenance Superintendent Miami Coca Cola Bottling Company, Miami, Fla.



SALVAGE PROGRAM FILLS

BASICALLY, soft-drink bottling and distribution is a business involving the volume marketing of low-priced merchandise. Since in many cases unit sales are small, delivery costs must be kept down to a minimum. For years, therefore, it has been one of Miami Coca Cola Bottling Company's fixed policies to junk neither trucks nor parts which proper reconditioning could restore to further usefulness.

Now, that both rolling stock and repair parts are difficult, if not impossible, of replacement, we feel that our conservation and salvage experience should make easier the job of keeping our truck fleet on the road.

Conducting its business under a franchise setting up definite geographical limits, the company operates entirely within the county in which it is located. Bounded on one side by the ocean and on the other by the Everglades, the inhabited area consists of a narrow coastal strip five

to six miles wide and about 45 miles long.

Working this territory intensively we sell to drug stores, sundry shops, chain food stores, corner groceries and cross-roads general stores. Among our customers, too, are filling stations and barbecue stands in outlying districts and downtown restaurants and sandwich bars.

In normal times the company delivers upwards of one million 24bottle cases per year to approximately 2000 customers. And in serving them its fleet rolls up an annual roundfigure total of 300,000 miles.

Before we adjusted our delivery schedules in cooperation with ODT's request for curtailed mileage, we operated 60 units. Since then, we have shaved down our yearly travel to about 180,000 miles, and have reduced the number of vehicles in operation to 37, including 2 passenger cars used for business purposes by company executives.

With the exception of seven ½-ton units and one 1½-tonner, all of our trucks are of 2½-ton rating. And all but the ½-tonners, which are pick-up jobs, mount special "deck" or case-carrying bodies. In two sizes, these have a load-capacity of 190 or 232 cases each. Of practically allmetal construction, our truck bodies are built and reconditioned here in our own shop.

The shop is a 50 x 100-ft. wing at the west end of our plant. Adjoining the shop, at the rear and on one side, is an asphalt-paved, wire-fenced enclosure which serves as a parking lot for our vehicles when they are not in actual use. During favorable weather this yard also provides working space for making mechanical adjustments or minor repairs.

Besides myself, our repair personnel consists of only one man—a first-class mechanic. However, since I am responsible for plant as well as fleet upkeep, I can draw on helpers regu-





merous other salvaged parts

FLEET'S PARTS B

larly assigned to plant maintenance for such routine automotive work as washing, greasing and tire inflation. Furthermore, our present delivery schedules are so arranged that all fleet maintenance can be carried on during the daytime, making staggered working hours unnecessary.

Nevertheless, with the personnel mentioned we do practically all of our fleet maintenance here in our own shop. About all we have done outside are major tire and radiator repairs and battery rebuilding.

The conditions under which our fleet operates differ in several respects from those more or less common in other lines of business. For one thing, the use of standardized packages—cases and bottles—and the carrying capacity of our truck bodies, themselves, automatically prevent overloading. And there is no question of over-speeding. Our fleet units always have been governed to a uniform 30 m.p.h.

There are two unusual angles in this fleet's maintenance program. First is its policy of never junking a truck until it is hopelessly outworn.

This naturally infers that the trucks in this fleet have seen many years of service. The fact is that the majority of trucks are at least 17 yr. old.

Second is the policy of stripping discarded trucks of usable parts and reconditioning them for future service. In this effort practically every salvage process has been tried with success. Not only has this policy enabled the fleet to fill two parts rooms with good parts, which may keep it rolling for the duration, but the cost records show that replacement parts bills during this period have been cut by 80 per cent. The valuable experience gained cannot be measured in dollars and cents.

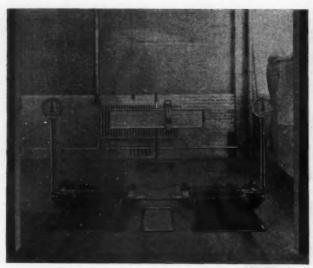
In addition to the salvage program, a study of the entire maintenance operation should provide fleet operators with a wealth of wartime operation ideas.

Each of our heavier jobs is manned by a driver-salesman and a helper. Starting his route with a full load, the driver sells his customer, delivers the order on the spot and picks up the "empties" resulting from the previous sale.

To a large degree our drivers are in business for themselves. They get a per-case commission on their sales of a commodity for which the climate and a popular leaning toward bottled beverages provides a year 'round demand. In order to cash in on their opportunities, drivers have to make deliveries on schedule. They cannot afford unnecessary delays which lose business to competing salesmen.

Therefore, we place on our drivers a greater responsibility for the vehicles in their charge than would be wise under other circumstances. It is up to the maintenance department

(TURN TO PAGE 80, PLEASE)



To evercome the excessive time consumed waiting in line for state inspections, this fleet was granted a private license with two own bended inspectors. Time and costs were reduced, safety improved



This view, just leside the entrance door of the shop, shows one mechanic checking tire pressure while second door man makes other daily PM checks. Truck preceding is being washed—the second step in the door check system



Harry Shaddock

THIS company inaugurated a preventive maintenance plan in 1930 to include all of its 96 repair shops throughout the country. Its pur-

pose then was to reduce operating costs by conserving trucks, parts and tires. The emphasis, then as now, was on tires. In spite of its national scope, the program was easily managed by these specific regional or territorial arrangements, with a vehicular supervisor in charge of each region.

For example, one at Washington, D. C.; New York City for New England; Kansas City, Mo., for the Southwest; Chicago for the Middle West, and Los Angeles for the West Coast. The same general regulations apply to each shop under the jurisdiction of a regional vehicular supervisor.

The management has always employed competent foremen and mechanics, and has asked them to keep as close to the general policy as possible. This has worked well, and minimizes personnel turnover. However, the shop foremen have plenty of leeway to make them feel that their judgment is important, their knowledge necessary. Each may outline his own local programs. If he goes wrong, then he is corrected.

Our checking-at-the-door system,



A good job of man-hour savings is equivalent to having extra manpower, this fleet maintenance program démonstrates. The author describes a daily PM check system, in force for 13 yr., where 50 trucks are gassed, the tires, oil and water checked and each vehicle washed in one and one-half hours by two mechanics and two washers.

The men follow a prescribed system as the vehicles come in nightly from their routes. At certain intervals the other PM checks, such as front end alignment, brakes, etc., are made. Checking at the door not only organizes PM inspections on a production line procedure to save time, but it provides positive assurance that the condition of every vehicle in the shop is good or that its faults are known and being corrected so that they are ready to roll the following morning.

Of additional interest to fleet operators

Of additional interest to fleet operators should be the all-round conservation program and the maintenance cost records which coordinate the activities of 96 scattered repair shops to operate as smoothly as one.

CHECKS AT DOOR

Bakery fleet operator devises a fast PM check system

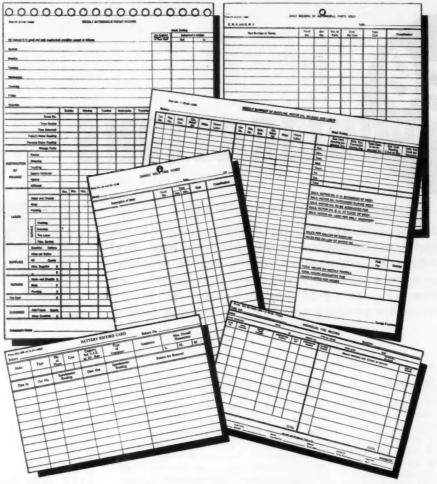
which has been a concrete part of our PM program for many years, is synonymous with saving man-hours. It is comparable to industrial mass-production methods. For example, we can perform four important daily services on 50 trucks in about 1½ hours with two men.

This is the procedure: Two men are stationed just inside the garage entrance. As the truck enters, one man checks the oil to determine crank case level and color. If the oil is clear and up to level, he proceeds to the next point of inspection. This

job takes less than half a minute. If the oil is dark, thin or dirty, the truck is ordered out of the line, and it serviced according to the specific needs, which will be explained later on in this article. Next he checks the radiator. If the water is not up to level, he adds more from a hose attached to the wall within easy reach. Antifreeze is tested once each two weeks, excepting in extremely cold weather when it is tested daily to avoid accidental freeze-ups.

Meantime, the other workman







Adequate costs records are maintained to determine and compare not only general overhead but gasoline consumption, tire mileage, etc., of all trucks at the 96 shops

SPEED FLEET'S PM

on mass production line principles that assures complete coverage at great time saving

pressure. If okay, he passes the vehicle, but, as with oil inspection, if anything is out of order, the unit is diverted from the line for the proper corrective service.

Tires, oil and water being in order, the driver moves ahead about 20 ft. and stops under the power shower. Water under pressure then is forced down on the top and over the sides of truck body. This power shower flushes off dirt and dust, while two car washers, one on each side, clean the sides and fenders with fountain brushes as the vehicle moves slowly.

by HARRY SHADDOCK

Garage Superintendent, Continental Baking Co. Wonder Bread Bakery, Chicago, III.

Immediately after this process, the driver parks his empty truck in its proper stall. By morning when he starts out with his load, the truck is dry and clean.

The car washing job requires an average of only 1½ minutes per car. This is made possible by doing the job daily, and because the washing equipment is located in the driving

lane. The equipment is simple and designed for speedy work.

Much more time is saved in mechanics' man-hours by having each salesman put his own truck in its proper stall. It is but an extra few moments for each driver, yet it does amount to considerable mechanics' time to park 50 or 60 trucks each night. But that is not all. It prevents jamming of fenders and prevents marring body and panels.

The management considers neat appearance of trucks as good adver-

(TURN TO PAGE 92, PLEASE)

BLICATIONS

VALUABLE AIDS FOR FLEETMEN

A selected list of the latest literature — books, pamphlets and catalogs — intended to help fleet operators solve maintenance and operating problems. They are more valuable today than ever before. All are free. To get your copies simply fill in the numbers on the postcard and mail. No stamp is needed.

KEEP 'EM ROLLING USE THIS NO STAMP NEEDED

L96. ODT Service Manual

Fleet operators who want to keep their equipment in top-flight condition during the war transportation crisis, but who have been unable to set up a specific maintenance plan because of a lack of easily applied information, can now secure a manual to help them in this connection.

Based on a preventive maintenance report prepared by the SAE at the request of the ODT, the manual sets forth the ABC's of vehicle maintenance and outlines the kind of inspections, checks and adjustments that should be made to assure efficient and economic operation of all types of motor vehicles.

The manual should also prove helpful in coping with mechanical problems arising from the tire inspection program. Write L96 on the postcard for your free

L97. Extinguisher Service Manual

Fleet operators who have fire extinguisher equipment on their trucks or in their shops will be interested to know that a new handbook has been published dealing with the maintenance and proper use of such equipment.

The handbook is divided into five sections: vaporizing liquid type, soda acid type, foam type, anti-freeze types and carbon dioxide types. All the information that is necessary for the maintenance and use of all the various types is given. Operators will find this a valuable handbook in helping them to keep their fire fighting equipment in A1 condition. Write L97 on the postcard for your free copy.

L98. Battery Service Manual

One of the leading storage battery manufacturers has prepared a 20-page manual which provides a most complete and handy reference book for servicing batteries in heavy duty service.

The manual contains complete replace-

ment battery data, tables covering all makes of trucks and other equipment using storage batteries. Engineering information on the care of batteries is also a feature that adds to the value of the manual.

The manual is divided in two sections: battery service "on the highway" which includes trucks, buses, taxicabs, etc.; and "off the highway" service which includes tractors, cranes, road-building machinery, etc. A copy of this manual should be in every operator's file. Write L98 on the postcard for your free copy.

L99. Electrical Parts Catalog

Here is just the catalog that fleet operators, who are experiencing trouble in purchasing parts for such electrical items as switches, trailer connectors, wiring assemblies, etc., should have. The catalog lists many small parts of electrical units, which now may be purchased separately. Many units, such as switches, which were formerly replaced, now may be repaired by replacing with only the parts that are actually broken.

Listed in the catalog are such items as: starter switches, stop-light switches, wire terminals, pilot lights, dash switches, junction boxes, etc. This catalog should prove especially helpful to operators who are trying to conserve vital electrical parts. Write L99 on the postcard for your free

L100. Fifth Wheel Service Book

A timely service manual on the care of fifth wheels is now available to fleet operators. This booklet deals with the details of maintenance of fifth wheels and the features to which attention should be given periodically to best maintain them in proper condition.

This manual will help operators and mechanics to better understand and maintain their fifth wheel equipment, thereby saving replacement of vital and hard to get parts. A fine manual for operators to give to their new service men. Write L100 on the postcard for your free copy.

L101. Fleet Cleaning Guide

Here is a new booklet that should prove of interest to fleet operators. It describes in detail how the four important maintenance jobs of tank degreasing, steamdetergent cleaning, cooling system maintenance and shop floor washing may be satisfactorily handled with one, single cleaning material. The booklet concisely describes the right methods to employ in using this material and how much time can be saved in the cleaning of parts, etc.

Briefly outlined are the four main typés of maintenance where the advantages of this new material have been convincingly established by experienced owners and operators of truck, bus, tractor and garage service and repair shops. Every operator who is concerned with the speeding up of his cleaning methods, or desirous of improving them, should have a copy of this booklet. Write L101 on the postcard for your free copy.

L102. Colloidal Graphite Facts

For fleet operators who are interested in colloidal graphite, a new 12-page illustrated bulletin is now available on this

This bulletin describes the physical and chemical properties of "dag" colloidal graphite and how it differs from other forms of graphite. It describes how it is used as a lubricant for running-in engines, for high temperatures, for impregnating porous bodies, and many other uses. A number of typical applications are illustrated. Write L102 on the postcard for your free copy.



CHECKLE CAR JOURNAL

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The latest in shop equipment, supplies, replacement parts and accessories developed by manufacturers for fleet operators. For more details of any product described, fill in the number on the postcard and mail. No stamp needed. Also use the postcard for additional information on any product advertised in this issue.

P106. Spring Tester

The P. A. Sturtevant Co., Addison, Ill., announces a new tool for testing compression springs in sizes to $2\frac{1}{2}$ in. diameter and 7 in. in length. It is operated with any accurate standard torque wrench. The torque wrench serves as both the operating lever and the measuring element. A sound device is used to indicate when the spring has been compressed to the test point. Compression of spring is against a rigid platform to prevent accumulated errors in reading.



The manufacturer reports that this tool is so engineered and compensated that it is in itself inherently accurate and hence test readings will be as accurate as the torque wrench used. It can be adjusted for any test by merely regulating the height of the test platform to match the length at which the spring is to be tested.

Use free postcard for more details

P107. Plastic Tire Valve Cap

A new all plastic tire valve cap has just been announced. It is said to seat perfectly and hold air up to 400 lb. pressure with-

out the use of washers. According to the manufacturer, Lacey-Webber Co., Kalamazoo, Mich., the cap is molded in one piece, and possesses such strength and ruggedness that it withstands abuse equal to a metal cap.



It possesses further advantages, the manufacturer states, in that an unthreaded finder skirt acts as a guide to simplify application when valves are awkwardly placed. It also has a wide knurled band for firm gripping and a domed head which provides adequate clearance of the valve core pin.

Use free postcard for more details

P108. New Valve Lifter

The New Britain Machine Co., of New Britain, Conn., has just announced a new tool known as the Fay-O-Rite valve lifter, which has several unique features.

It is short enough to fit most jobs, and has an unusual feature of permitting a mechanic to form the ends to fit special



The lifter has actual chisel points, and because it is drop forged and not stamped, the manufacturer claims it can be bent cold in a vise so that a mechanic can actually make a special tool for tough valve jobs.

Use free postcard for more details

P109. Hydraulic Jack Oil

The Walker Manufacturing Co. of Wisconsin, Racine, Wis., has developed a new oil for use in all hydraulic jacks. The manufacturer claims that the new oil, known as "Hydroyl-50," is a scientifically compounded oil alloy containing special ingredients that prevent interior corrosion and preserves cup leathers.

It is recommended that to prolong jack life, it should be periodically drained, flushed and refilled with "Hydroyl-50."

Use free postcard for more details

P110. Work Inspection Mirror

There are numerous occasions in the repair and adjustment of automotive equipment and machine shop work where it is necessary to inspect work from behind the



worker's range of frontal vision. This is not always possible or convenient, especially where obstructions block the mechanic's view. Normally, he is obliged to make temporary adjustments or checks, leave the work and move around to the other side for inspection. When this is not possible, assistance is required.

The Snap-On Tools Corp., Kenosha, Wis., has designed an adjustable inspection mirror just to take care of this condition. It is called the Blue-Point "See-Eee-Zee" Mirrorriem.

A most useful feature of this device is the convenient locking arrangement, operated by one hand, by means of which the

(TURN TO PAGE 90, PLEASE)

WARTIME STARTER, GENERATOR

ORE and more emphasis is now being placed on the repair of parts rather than on the replacement of them. In the case of electrical units such as starters and generators, which use such scarce materials as copper, brass, etc., manufacturers recommend that service procedures be adopted to preserve and make these parts last as long as possible.

Starter and generator service procedures as recomended for Delco-Remy units are listed below. By following these procedures, fleet operators can help in the conservation of vital materials, and at the same time insure trouble-free operation of these electrical units, thereby forestalling costly and time-losing vehicle

Starter Service

LUBRICATION

- 1. All bearings provided with hinge-cap oilers should have 8-10 drops of engine oil every 5,000 miles.
- 2. Gray iron or bronze bearings with grease cups should have the grease cuns kent filled with medium cup grease and turned down one turn every 5,000 miles.
- 3. Do not oil excessively and never oil the commu-
- 4. On some models, oil wicks are used for lubrication of the center or drive end bearing. The wick is saturated with oil before assembly. Whenever the starting motor is removed from the engine, the oil wick should be saturated with oil before the unit is reinstalled.

CLEANING COMMUTATORS

- 1. Remove the cover band and inspect commutator at regular intervals. The frequency of the intervals will be determined by the type of starter as well as the operation. Generally speaking, starting motors should be inspected every 5,000 miles of operation.
- 2. If the commutator is dirty, it may be cleaned with a strip of No. 00 sandpaper. Turn armature by hand, or the starting motor may be operated with the ignition switch off. Do not operate starting motor for more than 30 seconds.
- 3. Never use emery cloth to clean commutator.
- 4. All dust must be blown from the starting motor after the commutator has been cleaned.

COMMUTATOR REPAIR

1. If the commutator is rough or out of round, or has high mica, remove the unit from the engine and disassemble the armature. Turn the commutator down in a lathe, removing only sufficient material to true up the commutator and remove roughness and high mica. Undercut the mica 1/32 in.

BURNED COMMUTATOR BARS

- 1. If there are burned bars on the commutator, it may indicate open circuited armature coils, which will prevent proper cranking. It may also indicate high
- 2. Resolder commutator leads at the commutator bars that show burnt condition. Use rosin, not acid flux for soldering
- 3. After soldering, true up the commutator and undercut mica.
- 4. Do not replace armature for burned commutator bars unless bars are so badly burned that the burned material cannot be turned off in a lathe.

1. Replace only brushes that are badly worn. They need not be replaced until they have worn down to less than half their original length.

A summary of repair methods that will enable mechanics to stretch the life of vital starter and generator parts and at the same time insure first-rate job

- 2. If brushes wear rapidly, check for excessive brush spring tension. Tension can be changed by bending the spring down to increase or up to decrease.
- 3. Check to make sure that all brushes are free to swing or slide in their holders, and that they are making good, clean contact with the commutator.
- 4. Roughness or high mica on the commutator will cause brushes to wear rapidly. Check commutator.

BEARINGS OR BUSHINGS

- 1. Tight or dirty bearings will reduce armature speed or prevent the armature from turning.
- 2. A worn bearing, bent shaft, or loose field pole screws will allow the armature to drag on the pole shoes, causing slow speed or failure of the armature to revolve. Check for these conditions.
 - 3. Replace individual bushing or bearing if needed. 4. If armature shaft is bent, straighten it in a
 - 5. Tighten pole screws if loose.

STARTER DRIVES

- 1. The starting motor drives must be kept clean to operate freely.
- 2. If cleaning fails, then check bushings, springs, etc., of the starting motor, and replace them if worn.
- 3. Bendix drives should be lubricated by the addition of a small amount of light engine oil. Avoid adding more than a small amount of oil, as this would tend to gum on the spiral and prevent proper action.
- 4. The internal mechanisms of overrunning clutch drives are packed in a special high melting point grease in their initial assembly and require no further lubrication. It is not advisable to subject the overrunning clutch to grease dissolving or high temperature cleaning methods, since this may cause the clutch to lose its
- 5. If drive is beyond repair, secure exchange drive from authorized distributor.

STARTING SWITCH

- 1. Use a low-reading voltmeter across switch terminals while cranking engine to determine condition of
- 2. If the voltage drop is more than 1/2-volt, remove the switch and file the contacts clean.
- 3. Remove no more material than is necessary from

Generator Service

LUBRICATION

1. All bearings provided with hinge cap oilers should have 8-10 drops of light engine oil every 1,000 miles,

- 2. Generators with grease cups and bronze bearings should have the grease cups kept filled with medium cup grease and turned down one turn every 500 miles. With hall bearings, the grease cup should be kent filled with ball bearing grease and turned down one turn every 1,000 miles.
- 3. Do not lubricate excessively, since excessive oiling may cause oil and grease to gum on the commutator and cause a reduction of the generator output. Never oil the commutator.

CLEANING COMMUTATORS

- 1. Remove cover band and inspect commutator at
- 2. If the commutator is dirty, it may be cleaned with a strip of No. 00 sandpaper held against it with a piece of wood, with the generator in operation.
- 3. Never use emery cloth to clean commutator.
- 4. All dust must be blown from the generator after the commutator has been cleaned.

COMMUTATOR REPAIR

- 1. If the commutator is rough or out of round, or has high mica, remove armature from the generator and turn down the commutator in a lathe. If there is evidence of thrown solder, resolder leads before turning
- 2. Remove only sufficient material to remove the roughness and high mica and to true up the commu-
- 3 Undercut the mica 1/32 in, between all commutator bars.

BRUSHES

- 1. Replace only brushes that are badly worn. They need not be replaced until they have worn down to less than half their original length.
- 2. Excessive spring tension causes brushes to wear rapidly. Adjust spring to correct tension.
- 3. Low spring tension causes reduced generator outut, arcing and burning of the commutator and brushes. Adjust to correct tension.
- 4. Check the pigtail lead connections to see that they are tight.
- 5. Noisy brushes can be corrected by using a bedding (brush seating) stone. With the generator operating at medium speed, press bedding stone firmly against the commutator and move it back and forth to cover the area contacted by the brushes. The brushes should seat satisfactorily in a few seconds. Then blow out any dust or particles of abrasive material with

SERVICE

 Check the insulated brush holders for ground, using a 110-volt test lamp. Repair or replace as required.

BALL BEARINGS

- Many bearings are replaced needlessly, because traces of dirt and foreign matter are mistaken for a defective bearing.
- After removing bearings, clean and wash with gasoline or kerosene, but do not use any gasoline containing any anti-knock compound.
- 3. Do not spin bearing in hand or with air hose before it has been cleaned (this is to prevent scratching of the bearing by the dirt before the bearing has been cleaned.)
- 4. Lubricate the bearing with clean engine oil before rotating it for feel.

FIELD COILS

- Check field coils for open circuit or ground with a 110-volt test lamp.
- 2. Repair field coils by retaping or soldering the connections.
- 3. Replace only burned or irreparable, burnt-out coils, thus saving vital material.

BUSHINGS

- 1. Never replace end frame as a complete unit because of bushing wear.
- 2. Press out old bushing with an arbor press and press in new bushing where required.
- Your machine shop can make un and fit odd types
 of bushings if they cannot be secured through regular
 channels.

BELT

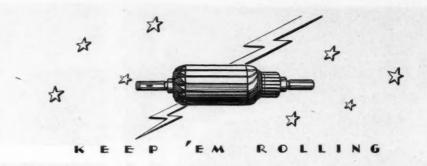
- 1. Check the belt if the generator is belt driven and tighten if necessary.
- 2. Low belt tension will cause a reduced and unsteady output.
- 3. Excessive belt tension will cause rapid belt and bearing wear.
- 4. Belts are serviceable until they ride on the bottom of the pulley. If belt is frayed, trim off frayed ends and reinstall unless the belt is riding on the bottom of the pulley.

CLEANING ARMATURES AND FIELDS

 Do not clean the armature or fields in any degreasing tank, since the compounds used in this type cleaner may cause damage to rubber and mica or enamel insulation.

WIRING

- 1. Do not replace a complete wiring harness, replace only those wires which are absolutely necessary.
- 2. Most wires can be repaired by placing a piece of loom or tape over the deteriorated part.
- Bad spots in a wire can be replaced by making a splice in the wire, then solder the ends together and carefully tape them.
- If wire is not long enough to make a splice, then splice in a short piece of wire and solder and tape up the ends.
- All connections in the charging circuit must be clean and tight as loose connections and corroded joints cause high resistance and may result in serious damage to equipment due to excessive voltage.
- 6. All solder joints should be made using rosin flux, wever use an acid flux on electrical connections.

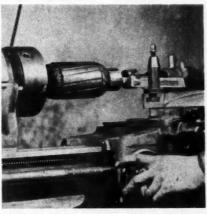




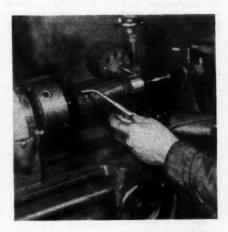
Bearings and bushings should be lubricated at specified periods with the correct amount of lubricant to insure long life of units



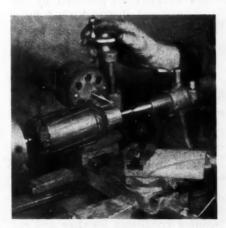
Dirty commutators should be cleaned with a strip of sandpaper. Never use emery cloth. Blow out all dust after cleaning commutator



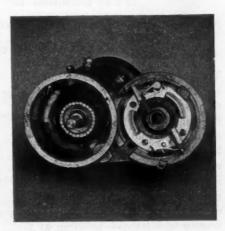
Rough or out of round commutators should be turned down in a lathe. Remove only enough material to true up the commutator



After turning down commutator always blow out all dust with an air hose. Failure to do so may result in a grounded armature

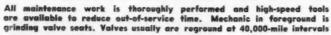


After truing up commutator it is necessary to undercut the mica 1/32 in. Use hacksaw blade or undercutting tool for this purpose



Do not replace end frame as a complete unit because of bushing wear. Press out old bushing and press in new bushing where required









Tires are checked by each driver approximately every 180 miles, or at two check-in stations between Cleveland and the company's eastern terminal. Two reminders, posted in the cab of each truck, insure checking

ROLLING WAR GOODS 23 HRS.



Theodore B. Rawlins

HAULING war goods from Cleveland and Detroit factories to war plants in New York and Connecticut keeps trucks of the Middle Atlantic

Transportation Co., Inc., on the road for 23 out of 24 hr. daily. In one of the most intensive operations in the trucking industry, 17 out of 20 trucks on the 585-mile run between Cleveland and the company's eastern terminal are in service all the time. The remaining three trucks are undergoing their weekly engine tune-up and other phases of the company's preventive maintenance program at the Cleveland terminal. Sixty drivers, three men to a tractor, keep these

trucks rolling seven days a week in speeding vitally needed parts to eastern war production centers. The fullest utilization of equipment, as advocated by ODT, is practiced by the company, and this is backed by a comprehensive maintenance procedure that minimizes breakdowns and tire failures.

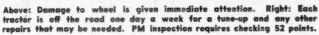
Trucks engaged in the Cleveland-Detroit to New York-Connecticut service average 624,000 lb. payload per unit per month compared to 192,000 lb. per month for company trucks before wartime traffic became heavy. Most of the freight carried on this route is war material. Gearing up the operation to a rigid schedule, which is adhered to except when severe weather conditions interfere and rotating three drivers on each unit instead of employing one, have made

this increased movement of freight possible. Two drivers accompany each truck on the round trip east from Cleveland and Detroit while the third driver enjoys his time off.

Tire care is emphasized with the Middle Atlantic fleet. Correct pressures have been determined from experience. At the start, the tire manufacturer made recommendations as to the right pressure to use, taking into account the size and weight of the equipment and the load carried. If the pressure built up more than 10 per cent in the tires, the original inflation figure was regarded as too low and an adjustment was made. If no pressure was built up, the original specification of the manufacturer was regarded as too high. Tires are never permitted to build up more than 10 per cent in pressure.









A DAY

If a tire is overinflated, it is never bled but is allowed to cool off. Sometimes cold water is turned on the tires to hasten reduction to normal pressure.

New tractor tires generally are started out on the front wheels and then switched to the drive wheels after about 10,000 miles. This permits a gradual break-in period before the new tires get intensive use on the power wheels.

The company also has tires recapped, with a resultant prolonging of tire life. Among more than 100 tires recapped, the average carcass life is over 100,000 miles. A tire is recapped at the discretion of the tire man, whose long experience in estimating carcass life and condition of the tread makes him qualified to determine the proper time. He also can



Middle Atlantic fleet keeps rolling seven days a week over 585-mile cross country run as wartime PM program cuts maintenance costs to 11/2 cents

by THEODORE B. RAWLINS

Operations Manager, Middle Atlantic Transportation Co., Inc., Cleveland, O.

Delivering war goods from Cleveland and Detroit factories to war plants in New York and Connecticut keeps these trucks on the road practically every hour, every week. Each unit hauls an average of 624,000 lb. payload per month, against 192,000 lb. in pre-war days.

To handle this approximate 325 per cent increase required some changes, especially in truck maintenance. Just how successful these changes have been is attested by the fact that, even under present grueling conditions, average tire mileage exceeds 65,000 for front tractor and trailer wheels, 42,000 for power wheels and 40,000 for recaps; gas consumption averages 4.5 m.p.g. for 501-cu. in. engines; oil averages 130 m.p.g., etc. Maintenance costs average less than one and one-half cents per mile. Trucks annually average better than 90,000 miles.

ROLLING WAR GOODS 23 HRS. A DAY

consult the individual tire records and use depth gages to help reach a conclusion. Size 11.00x20 tires are used. Tires now running on their second recap will be good for a third recap. Elimination of overload, low operating speed and lack of abuse have resulted in up to 40,000 miles on recaps. One tire covered 121,104 miles before recapping and now is nearing the 130,000-mile mark. Recaps are used on all except the front wheels.

In the case of dual tires, those on the outside carry 10 lb. more pressure than the inside tires. This compensates for the high crown on narrow eastern roads, minimizing wavy treads and inside shoulder wear. Evenly worn tires are matched together on the dual wheels of the tractors and trailers. Recapped tires are matched together, never being paired with new tires or used tires that have not been recapped. This makes for more even wear by both tires and keeps the treads roughly comparable. The tire man judges wear on the basis of long experience.

Each truck carries a sticker on the inside of the windshield which lists the proper pressure for all tires and the maximum pay load. Each truck also carries a pressure record card, which is kept in the cab, and on which the driver notes the pressure of each of the tires when he checks them. Each truck also carries a pressure gage. The tires are checked by the driver approximately every 180 miles, or at two check-in stations between Cleveland and the company's eastern terminal. The pressure record card serves as a reminder and a check on the driver to see that he tests the tire pressure at the proper intervals.

Every tire lug is checked before and after each trip and all the tires are inspected for bruises and breakdown every 1200 miles, or each round trip.

Each unit carries two spare tires. If a tire change is made on the road, the driver makes out a tire change tag, listing the vehicle number, mileage, date, cause of the change, tire serial number and the position of the tire changed.

After the necessary repairs and changes are made by the tire man at



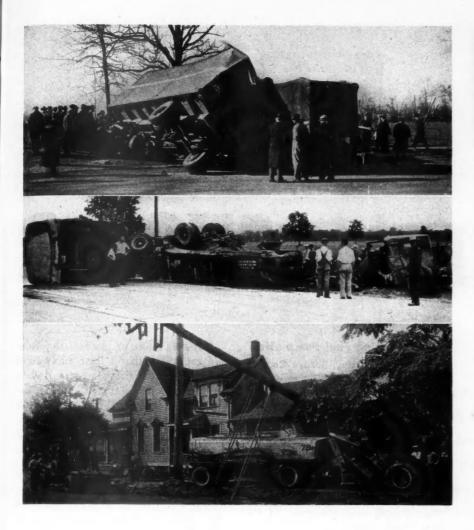
A few of the excellent record and inspection forms used to control and coordinate maintenance work

Cleveland, he sends the tire change card to the company office, where the same data are transferred to a permanent tire record card. One of these cards is on file for each of the tires owned by the company. The tire man, who also handles battery service, is an expert in his line and has had long experience in tire maintenance work, including training at the tire factory.

This tire program has brought tangible results, blowouts being reduced 65 per cent over a three-month period. Before the rigid tire checking practice went into effect, 62 tire failures were reported in a three-month period. This was cut to 29 tire failures in the next 12 weeks. Average tire mileage before recapping exceeds 65,000 miles for front tractor and for trailer wheels, while it exceeds 42,000 miles on power wheels.

The company's main service garage is maintained at Cleveland, where there are three day mechanics, one lubrication man, one parts man, one tire and battery man and two night mechanics. All major service require-

(TURN TO PAGE 74, PLEASE)



ACCIDENT PREVENTION PROMOTES CONSERVATION

An all-out safety campaign on the transportation front will save manpower, vehicles, parts and valuable cargoes

By H. D. SCHEFFER

Director, Motor Vehicle Safety, Auto-Owners Insurance Co., Lansing, Mich.



H. D. Scheffer

At the top of every fleet operator's list of problems today is shortage; vehicles, replacement parts, tires, manpower, to name only a few.

One way to compensate for shortage is, of course, conservation, and conservation programs are in effect, to a greater or lesser degree, in every fleet shop. However, most of these programs deal with the mechanical aspect of fleet operation, such as periodic inspections, preventive maintenance, etc.

We are of the opinion that no conservation project is complete if it does not embrace a thorough, effective fleet safety program. Accident prevention is directly related to preserving and prolonging the life and service of manpower, vehicles and the cargo hauled; the latter may be seriously needed, essential war goods.

For many years we have pursued the policy that a good fleet safety program is a profitable proposition for any fleet operator. Today it is more so. We also find that the intensive accident prevention policies developed about 10 years ago are just as effective in the fundamentals as before the war.

From the beginning of our fleet safety program we have assumed as a premise that truck drivers as a class are the most skillful drivers on our highways today. Also, since it is estimated that probably not more than 15 per cent to 20 per cent of accidents are due primarily to faults in equipment, it follows that the vast majority of highway accidents definitely are caused by drivers, and such accidents can be prevented only through drivers. Our company further has assumed that most highway drivers, being skilled, know a great deal about the fundamental causes of accidents and also about the basic things that must be done to control these accidents.

Hence, we have always believed that the chief job of a fleet operator, in getting over a real "safety message" to his drivers, is to keep them constantly reminded of what they already know about the safe-driving essentials in checking their equip-

(TURN TO PAGE 116, PLEASE)

1. Valve Spring Compressor by Harry Bernien, Reedsburg, Wis.

For servicing valve-in-head type valves, we designed and built a foot-operated valve spring compressor. This type of compressor leaves both hands free to dismantle valve locks, washers and springs, with but little possibility of losing any of the small parts. The action is much faster than when using a hand-operated spring compressor.

The compressor stand was made from scrap stock at no cost other than the labor involved to machine and assemble the parts. The accompanying sketch shows all the dimensions and the material needed to build the bench.

The pressure arms marked CA-502 and N-12679, may be purchased from any International Harvester dealer or may be made in your own shop.

2. Rear Axle Repair Stand by Timken-Detroit Axle Co. Detroit, Mich.

The job of servicing rear axle carriers can be greatly facilitated if a stand such as designed by the Timken company is used. When a carrier is mounted in a stand of this type, not only does it save time in servicing, but also it will permit a more accurate over-haul because, with the carrier held in a rigid position, the mechanic has both hands free to make any adjustments needed.

The stand can be adjusted to accommodate various size carriers. The accompanying sketch shows all the dimensions and materials necessary to build one of these carrier stands.



3. Prolonging Fuel Pump Life by Paul Woolemy, Borden Co. Dayton, Ohio

Here is a method which I use when installing new or rebuilt fuel pumps, which will help to prolong their life.

I pack the pump housing at the operating arm with a good grade of fibre wheel bearing grease. This helps to keep oil and carbon from entering the pump from the crankcase, and thus prevents excessive wear of the pump diaphragm.

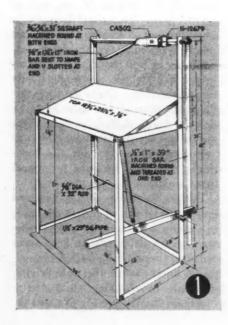
4. Fuel Pump Replacement by F. W. Green, Oshkosh, Wis.

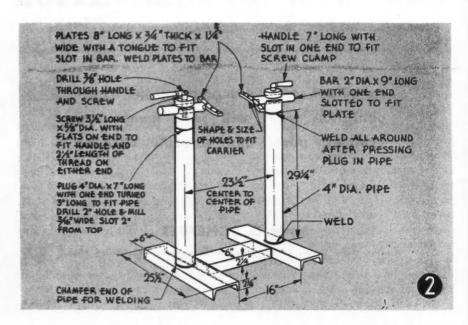
In most cases it is difficult to replace fuel pumps and start the bolts at the same time. Here is a method which I have used that makes it a simple job of lining up the pump. I insert studs in place of the bolts on every job that I have fuel pump trouble for the first time, then when it becomes necessary to remove the pump at a later date, it is an easy job to line it up when reinstalling it.

5. Die-Holder Adapters by Preston R. Coleman Norristown, Pa.

Having found out by experience that the die-holders furnished with Standard and SAE die sets do not allow room for threading in close places such as cylinder blocks, manifold studs or U-clamps on spring saddles, we made adapters which allow us to thread in close places.

For the smaller size dies we use a 2-in. inside diameter pipe by 6 in. long; for the heavy duty dies we use







HINTS

a 23/4-in. inside diameter pipe by 6

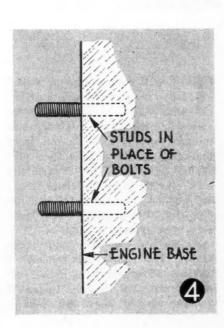
These adapters or die-holders will be found to be a great help when rethreading in close places and will particularly speed up rethreading Uclamps before assembly.

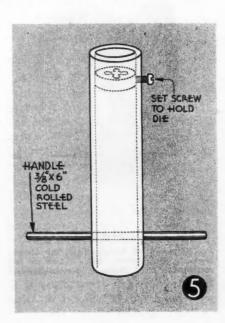
6. Preserving Stickers by J. W. Worthington Lexington (Ky.) Telephone Co.

In these days of ration stickers, federal tax stamps, state license stamps, etc., on truck windshields, I have found the following method of application to be most satisfactory and durable. First, I see that they are glued on firmly and smoothly, then I give them a coating of exterior clear dulux, extending roughly a quarter of an inch past the edges of the stickers.

Commercial Car Journal will pay \$5.00 for acceptable shop hints and \$5.00 for unusual parts salvage tips. Send in as many ideas as you have to the editor. Don't underestimate your ideas. Let the editor be the judge. A photograph or a rough sketch and simple explanation in your own words are enough. CCJ will polish them up for publication. Use this opportunity to earn extra money to buy Victory bonds and help win the war.











Top: All vehicles entering the shop must drive along the safety lane where numerous inspections are made quickly and where minor adjustments are made without interfering with other work in progress, as in the case of the welding job in the illustration below. The large illustration shows part of the general shop where major service work is performed. The small illustration on the opposite page shows the separate battery service department and the picture at the extreme right shows engine rebuilding work in progress.



by R. L. HARDGROVE
Superintendent of Maintenance, The Liberty
Highway Co., Toledo, Ohio, shown at left
above with W. M. Supinger, Service Manager



MODERNIZING SHOP

This over-the-road operator checkmates manpower losses

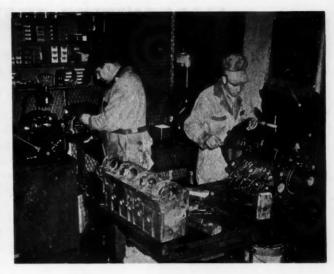
THE stiff competition for skilled labor in nearby war industries, with offers of above average wages, and the induction of men into military service took its toll from the ranks of our maintenance personnel soon after we entered the war. As the war industries grew, our business also expanded and the need for skilled manpower became even more acute.

As an over-the-road carrier, operating 175 trucks and trailers it was our responsibility to deliver essential war materials in increased volumes on, or ahead of, definite schedules into the war production centers of Cleveland, Akron and Canton, on the east, Detroit, Pontiac, Flint, Jackson and Lansing, on the north, and to South Bend and Chicago on the west, out of our main headquarters in Toledo, Ohio. To do this job efficiently, we knew that we had to maintain not only the usual complement of mechanics, helpers and other service men we always had employed, but more. This meant replacing the losses, if possible, or improving our maintenance methods to produce more work with fewer men.

We chose the latter method. A









Many suggestions have been advanced as solutions to the manpower problem. This fleet operator approaches his manpower problem from a different angle. Instead of help wanted advertising for "the little men who aren't there," he modernized his shop and put maintenance on a production line basis. He bought high-speed tools and equipment; provided more working room; made the men more comfortable by mod-

ern heating, lighting and ventilating equip-

The investment proved its value from the start. Maintenance was speeded up and the quality of work improved. Trucks were tied up for shorter periods, road breakdowns decreased, costs moved downward and the mechanics are sticking to the job. The details, outlined in this article are

worth studying.

EASES MANPOWER PROBLEM

by increasing efficiency and production of personnel with modern tools and equipment

shop modernization program, embracing larger quarters, modern equipment and general improvement in working conditions to increase manpower efficiency, was planned and put into operation.

The first step was the purchase of a one-story brick building, adjoining the shop. This was a 100 ft. square structure which gave us 10,000 sq. ft. of additional shop space. Next came the planning of an efficient layout to handle a maximum volume of work with minimum lost time and fewer men, and so on.

The final result has met our expec-

tations and achieved our objectives. The following data will supply the essential details of our modernized, efficient and high speed service.

Safety Lane

Our service is planned so that all vehicles entering the shop must drive along what we call the safety lane. where rapid inspections of lights, tires, brakes, etc., can be made quickly and efficiently. Two large electrically operated doors afford quick safe entrance from the left, and exit at the right. The lane extends full distance across rear of building.

A driver of a truck and trailer unit drives onto the lane which is serviced by two men, one on each side. The first step in their checking procedure is to test the air pressure in all truck and trailer tires. A hose reel on each side of the lane is long enough to reach all tires which are tested and inflated to proper pressure at the end of each trip into the Toledo maintenance plant.

There is a pit in the lane, 30 ft. wide, 20 ft. long and deep enough for men to stand erect while working. It is ventilated to draw out exhaust gases and force them outdoors by

MODERNIZING SHOP

EASES MANPOWER PROBLEM

(CONTINUED FROM PAGE 53)

means of electric fans. A sump pump removes melted snow and muddy water which drips off the trucks while they are serviced in the steam heated garage.

On each side of the pit is an individual testing platform to check tire alignment. At the same time, the men make casual tread and sidewall inspections. Other major tire inspections and tube repairing jobs are done by a full time tire man in another maintenance department, to be described farther on.

Brakes are also tested on the safety lane. If found out of adjustment, they are equalized from the convenient pits. Next comes headlight testing. By looking through the finder of a modern tester, this work takes very little time. Finally, the men inspect the condition of the load—doors, tarpaulins and load distribution.

In addition to improving working conditions, which cannot be counted in dollars and cents, we find that the safety lane saves the work of two men, a mechanic and a helper. In other words, if the new safety lane had not been constructed it would have required two more men to do the work now coming off the line. For example, one mechanic and helper can check all 10 tires on a semi-trailer unit in five min., compared to 20 min. the old way. The brake test on the safety lane gives instantaneous reading. The old way, we had to jack up the unit which took five times as long. And so on.

These basic inspections are now completed in 15 minutes to one-half hour per unit, providing that they require no major adjustments, without shifting men or vehicles all over the shop.

At right angles from the safety lane we installed the major equipment for motor tune-ups and major overhauling jobs. First, is the chassis dynamometer. Next we have a tachometer and, next to that, a distributor tester.

Near the analyzing units is a large pit in which we test out and break in our larger re-built motors. The big engines are more expensive and it is our aim to give them a longer and better work-out and more careful tests to assure long and safe service.

We try to do a fine job without the pit tests for the smaller motors. The dynamometer tests are usually sufficient. We break them in on a little running and then start them on light runs. This is a war measure of saving man-hours without sacrificing real quality of maintenance work.

We installed 200-watt fluorescent lamps above the space where our men make motor tune-ups and above the work benches. They use less current and give daylight illumination. Mechanics do better work and in less time and they feel that we are interested in their comfort. Good lights speed up work in this department by 10 per cent. Compared to the small initial cost, they are one of the biggest factors in helping us to keep our trucks rolling with the least time out, and to earn money.

The cheapest light is daylight. Precision work on dismounted engines is done on benches placed near the windows. We have left nothing undone that could be done to make working conditions better in the shop. The benefits have been mutual, and the result is, less labor turnover. Some of our men have been with us 14

Liberty Highway mechanic adjusts brakes from the pit in the safety lane. This and other operations are efficiently handled because the mechanic works in a comfortable position

years, others 7 years, and some 4 years during our maintenance program.

To save man hours and conserve all materials is the big "Must" in our whole national program, and it is amazing to observe how much we can accomplish under a great emergency. To save fuel, for example, we insulated the entire ceiling in the main shop with aluminum foil. This keeps the shop cooler in summer, warmer in winter. It improves light reflections from the fluorescent lamps above work benches, analyzers and other departments requiring good light.

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Next, the entire shop is ventilated through tubes which we made from sheet metal. They vary from 3 in. in dia. in the outer part of the building, to 8 in. in the motor testing department. These lines extend into the greasing pit and safety lane, as pointed out above. Fans operated by electric motors draw off poisonous fumes from the shop and pits and force them out doors.

Showers, lockers and spacious wash rooms were put in the new service building.

Over-the-road transportation is a vital part in our national economy, and therefore, mechanics must be retained for efficient truck maintenance. To further this program, we combined the improved working conditions with good wages and the results seem to have more than justified the efforts and in training workmen for the important job ahead.

In the main, we follow conventional methods of overhauling engines. But since the emergency we are conserving material and labor on engines ordinarily scheduled for first reboring jobs and over size pistons by merely honing the high spots to straighten up the cylinder walls and put in new rings, if necessary, to stop oil consumption and get proper compression.

This method makes each engine last longer. Actually, it adds one extra service period between major overhauling jobs; giving the engine another 50,000 to 75,000 miles.

Conserving man-hours is so important today that we must apply every possible method to use short cuts like this. Besides, we reduce the labor cost in this process to about one-quarter the cost of reboring.

Other equipment in this depart-(TURN TO PAGE 154, PLEASE)



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REDUCTIONS
in delivery mileage and substantial savings in
g a soline and
tires have resulted from the
government campaign a sking
consumers to

carry small packages, the Office of Defense Transportation reported. Results of a survey, conducted for the ODT in 47 cities by the Office of War Information field staff, reveal that the current campaign, through cooperation of retail store owners, has played an important part in ODT's truck conservation program.

Each city survey included a canvass of three stores—a fashion store. a department store, a specialty shop -and in most cases showed a comparison of 1941 and 1942 delivery figures. Cleveland, Ohio, reported that one high-fashion store cut delivery miles to 375,901 miles from the preceding year's total of 537,000 miles. In spite of increased buying and the fact that here, as in most high-priced department stores, women were unused to carrying home purchases, customers carried 714,250 more packages in the past few months. Over 33,000 gal. of gasoline were saved under the new plan which received complete approval of managers and customers.

A popular-priced store in the same city cut delivery mileage by almost 500,000 miles through cooperation of consumers who have carried 1,500,000 packages more than they did before the campaign was instituted. Twenty-two of the store's trucks are now being rotated to prolong the life of delivery service, store officials said. Specialty shops in Cleveland reported savings and reductions from 30 to 60 per cent over 1941 figures.

Stores reporting from Indianapolis showed, in the high-priced field, mileage reductions from 30 to 52 per cent with a commensurate package delivery drop of 540,894. Gasoline consumption at the same time dropped from 59,371 gallons to 51,891. A popular-priced store delivered 235,655 less packages, saved 10,527 gallons of gas, and was able to reduce its truck fleet by four trucks.



CONSUMERS HELP CONSERVE MILEAGE

ODT survey in 47 cities shows that package carrying saves gas, tires and trucks

Three delivery companies making deliveries for the majority of retail stores in Little Rock, Ark., Kansas City, Mo., and Louisville, Ky., reported substantial reductions in the delivery of small packages. Little Rock's delivery company servicing 90 per cent of the city's merchants reported an overall mileage reduction of 55 per cent. Small package

delivery dropped from 600,000 in 1941 to 350,000 in 1942. Of 29 trucks used in 1941, 12 have been withdrawn, and the remaining 17 are servicing approximately the same routes. Tire consumption has been greatly reduced as a result. Before the campaign, the average tire life was only three months. Now (Turn to Page 66, Please)



OPA USED TRUCK

OPA regulations set ceiling prices in the sale of used commercial vehicles .

TITLE 32—NATIONAL DEFENSE

Chapter XI—Office of Price Administration

PART 1360—MOTOR VEHICLES AND MOTOR VEHICLE EQUIPMENT

MAXIMUM PRICE REGULATION NO. 341—USED COMMERCIAL MOTOR VEHICLES

Under the authority vested in the Price Administrator by the Emergency Price Control Act of 1942, as amended, Executive Order 9250, and in accordance with Revised Procedural Regulation No. 1 issued by the Office of Price Administration, Maximum Price Regulation No. 341 is hereby issued.

AUTHORITY: $\S\S$ 1360.501 and 1360.522, inclusive, issued under Pub. Laws 421, 729, 77th Cong.; E. 0. 9250, 7 F. R. 7871.

§ 1360.501 COMMODITIES AND TRANSACTIONS COVERED BY THIS REGULATION—(a) TRANSACTIONS COVERED. This regulation establishes maximum prices for sales of used commercial motor vehicles, including sales of chassis or bodies separately. It covers sales by persons engaged in the business of selling such vehicles, that is dealers, and also sales by any other person. Dealers in used commercial motor vehicles and persons making frequent sales of such vehicles and persons making frequent sales of such vehicles as an incident of their regular business are licensed by this regulation. Sales of used commercial motor vehicles pursuant to a "recapture clause" in a rental contract entered into prior to the effective date of this regulation (but not those pursuant to a rental contract entered into after such effective date) are except from this regulation and from the General Maximum Price Regulation.

(b) COMMODITIES COVERED. When used in this regulation, the term "used commercial motor vehicle" means a self-propelled vehicle, or a vehicle drawn by it, which was designed for use on or off the highways for the transportation of property or of more than ten persons and which has been driven over 1,000 miles, and bodies of any such vehicles. It includes vehicles of the following types: complete trucks, truck tractors, full-trailers, semi-trailers, ambulances, hearses, omnibuses, carry-all suburbans, sedan deliveries, utility sedans, coupes fitted with pickup boxes, cab pickups, and chassis and bodies for all of the foregoing, but does not include passenger automobiles, taxicabs, station wagons, vehicles operated on rails, self-tracklaying vehicles nor farm and garden tractors designed and used for agricultural purposes. A vehicle which has been assembled by a manufacturer of trucks from components some of which are new and some of which are reconditioned shall not be deemed a used vehicle for the purposes of this regulation.

§ 1360.502 GENERAL OUTLINE OF THIS REG-ULATION—(a) MAXIMUM PRICES. The method of computing maximum prices for most sales is provided by § § 1360.504 and 1360.505. Maximum grices which are higher than those established by § § 1360.504 and 1360.505 are permitted in certain cases. Thus, § 1360.506 permits a higher price for a vehicle sold by a dealer which has been reconditioned by him and guaranteed in accordance with Appendix B; § 1360.507 in certain cases permits a higher price for the resale of such reconditioned and guaranteed vehicle by the purchaser thereof or by a person who has repossessed such a vehicle. A higher price is also permitted, by § 1360.507, on the sale of a vehicle within one year of its acquisition when new, if the price new included the 1 per cent allowance for maintenance operations provided by Supplementary Regulation No. 14.



(b) INVOICES, GUARANTEES AND TAGS RE-QUIRED. Every person selling a used commercial motor vehicle, whether or not he is a dealer, must give the purchaser a sales invoice containing the information prescribed in § 1360.512. In addition, a dealer selling a vehicle as "reconditioned and guaranteed" must furnish the purchaser with a signed guarantee in the form prescribed in Appendix B. A dealer, but not any other person, offering a vehicle for sale must also attach to such vehicle, in a conspicuous manner, a tag in the form prescribed in Appendix A.

§ 1360.503 PROHIBITION AGAINST SALE AT A PRICE HIGHER THAN THE MAXIMUM PRICE.

(a) On and after April 26, 1943, regardless of any contract, lease, or other obligation:

(1) No person shall sell or deliver any used commercial motor vehicle at a price higher than the maximum price established by the regulation;

(2) No person in the course of trade or business shall buy or receive any used commercial motor vehicule at a price higher than such maximum price;

(3) No person shall agree, offer, solicit or attempt to do any of the acts prohibited in subparagraphs (1) and (2);

(4) Notwitsstanding the provisions of paragraph (2), if, upon the purchase of any used commercial motor vehicle, which is sold as a reconditioned and guaranteed vehicle, the purchaser shall receive from the seller false information as to the extent of extras, parts, materials and labor used in reconditioning, and if in such case the purchaser shall have no cause to doubt the accuracy of such information and as a result of this pays a price in excess of the maximum price, the purchaser shall not be deemed to have violated the prohibition contained in paragraph (2).

(b) The provisions of paragraph (a) (2) of this section shall not be applicable to any War Procurement agency, or any contracting officer thereof, and any such contracting officer or paying finance officer shall be relieved of any and every liability, civil or criminal, imposed by this regulation or by the Emergency Price Control Act of 1942, as amended

§ 1360.504 MAXIMUM PRICES IN GENERAL—
(a) METHOD OF COMPUTING MAXIMUM PRICE. In determining the maximum price for any used commercial motor vehicle, the "base price" for such vehicle shall first be computed in accordance with § 1360.505. The allowable percentage factor, corresponding to the age of the vehicle, as defined in paragraph (b) of this section, shall then be ascertained from the table of percentages contained in paragraph (c) of this section. The maximum price shall be determined by multiplying such "base price" by such allowable percentage. However, when a vehicle is sold by a dealer on a reconditioned and guaranteed basis the maximum price may be increased as provided in § 1360.506 and in certain other cases the maximum price may be increased as provided in § 1360.507.

(b) METHOD OF DETERMINING AGE OF VEHICLE. For the purpose of this regulation, the term "age" means the following:

(1) FOR A COMPLETE USED COMMERCIAL MOTOR VEHICLE OR THE CHASSIS ONLY OF A USED COMMERCIAL MOTOR VEHICLE. (i) The period measured from the month and year in which the chassis of the used commercial motor vehicle was delivered when new to a person who purchased it for use and not for purposes of resale, if such date of delivery can be supported by original bill of sale or original invoice or certified copies thereoft, or

(ii) If such evidence is not available, the period measured from the first day of January of the year by which the model and year of manufacture of the chassis of the vehicle is designated by its manufacturer, or

(iii) If that information cannot be ascertained, a period of more than 72 months.

(2) FOR THE BODY ONLY OF A USED COM-MERCIAL MOTOR VEHICLE, WHEN SOLD SEP-ARATELY FROM THE CHASSIS. (i) The period measured from the month and year in which the tody was delivered when new to a person who purchased it for use and not for purposes of resale, if such date of delivery can be supported by original bill of sale or original invoice or certified copies thereof. or

(ii) If such evidence is not available, the period measured from the first day of January of the year in which the body was manufactured, if such year can be ascertained by the body number or other manufacturer's identification, or

(iii) If that information cannot be ascertained, a period of more than 72 months.

(c) TABLE OF PERCENTAGES CORRESPONDING TO THE AGE OF THE VEHICLE, BY WHICH THE "BASE PRICE" IS TO BE MULTIPLIED.

ge:											ı	9	er	C	ent
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More	than	6 n	nos. t	0	12 1	nos									81
More	than	12	mos.	to	18	mos.									73
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PRICE CONTROL

. Guarantee and itemization of repairs provided in case of reconditioned jobs

§ 1360.505 COMPUTATION OF THE "BASE PRICE". (a) The "base price" for any used commercial motor vehicle shall be the sum of

(1) The "value when new" of the vehicle, determined in accordance with paragraph (b) of this section;

(2) A transportation allowance, determined in accordance with paragraph (c) of this section; and

(3) The "value when new" of any extras, determined in accordance with paragraph (d) of this section.

(b) METHOD OF DETERMINING "VALUE WHEN NEW". The "value when new" for the vehicle being priced shall be determined by the first of the following which is applicable:

(1) COMPLETE VEHICLE LISTED IN APPENDIX C. If the vehicle being priced is listed in Appendix C the "value when new" shall be the price there listed.

(2) ONLY CHASSIS LISTED IN APPENDIX C. If the chassis of the vehicle being priced is listed in Aggendix C, and if the complete vehicle is not so listed, the "value when new" shall be the price listed in Appendix C for the chassis alone or the chassis with cab, whichever is appropriate, plus either one of the following:

(i) The original retail price new f.o.b. factory, for the body with which the vehicle being priced is now equipped, or

(ii) The retail price new, f. o. b. factory in effect on March 31, 1942, for the same or most comparable body.

(3) NEITHER COMPLETE VEHICLE NOR CHASSIS LISTED IN APPENDIX C. If meither the complete vehicle nor the chassis being priced is listed in Appendix C the "value when new" shall be determined as follows:

(i) If the vehicle being priced was purchased new as a complete vehicle, the "value when new" shall be the original retail price new of the vehicle, f. o. b. factory, or.

(ii) If the chassis and body were bought separately, the "value when new" of the vehicle shall be the sum of the price of the chassis or chassis with cab plus the price of the body, each determined by any one of the following methods:



(A) THE CHASSIS OR THE CHASSIS WITH CAB. The original retail price new, f. o. b. factory, or the retail price new, f. o. b. factory for the same or most comparable chassis of the same year of manufacture listed in Appendix C.

(B) THE BODY. The original retail price new, f. o. b. factory, or the retail price new, f. o. b. factory in effect on March 31, 1942, for the same or most comparable body.

(C) TRANSPORTATION ALLOWANCE TO BE INCLUDED IN "BASE PRICE." There may be in-

The Nation's stockpile of used commercial motor vehicles was brought under price control as of April 26, 1943, by the Office of Price Administrator.

By establishing ceilings at a percentage of the value of the vehicle when new, the new regulation is expected to halt the activities of speculators which have resulted in some instances in prices that are 200 per cent or more over the normal value of the used truck.

The regulation applies to all sales whether made by a dealer or a private owner or at an auction.

Covered by the new regulation, known as Maximum Price Regulation No. 341 (Used Commercial Motor Vehicles) and effective April 26, 1943. are complete trucks, tractors, full-trailers, semi-trailers, ambulances, hearses, omnibuses, carryall suburbans, delivery sedans, utility sedan, coupes fitted with pickup boxes, cab pickups, as well as chassis and bodies for all of the foregoing.

Two pricing methods are provided for resales, one for the vehicles "as is", the other for those reconditioned and guaranteed for at least 1,000 miles or 30 days.

Ceiling prices vary with the age of vehicles and are determined by applying specified percentages to the base prices of vehicles when new. Over 8,000 prices, which are the values when new of motor trucks, are incorporated in an appendix to the regulation.

The differential between "as is" and "reconditioned" prices provides an incentive for the salvaging of used commercial motor vehicles.

The regulation also contains special sections devoted to charges that can be made for "extras'—accessories or special equipment not included in the price of the vehicle when new, such as oversized of the vehicle. A dealer cannot make a charge for extras with which the vehicle was not equipped when it was purchased by him unless the extras were added by him upon the request of the purchaser.

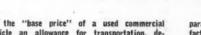
Provisions are included to cover special cases, such as the sale of a vehicle within one year after purchase as a reconditioned vehicle, the sale of repossessed reconditioned vehicles, and the cases where alterations are made at the request of purchaser.

made at the request of purchaser.

Dealers must attach a tag, the form and contents of which are specifically set forth, to all used commercial vehicles they offer for sale. In addition the contents of invoices which must accompany each sale, whether by a dealer or another person, are spelled out.

Reconditioned and guaranteed vehicles must be accompaniel by a guarantee, details of which are specifically set forth in the regulation.

Dealers and persons making frequent sales of used commercial motor vehicles as an incident to their regular business are licensed by the regulation (the text of which is published in full in these pages).



cluded in the "base price" of a used commercial motor vehicle an allowance for transportation, determined in accordance with the following subparagraphs:

(1) SALES WITHIN THE 48 UNITED STATES AND THE DISTRICT OF COLUMBIA. Upon any

AND THE DISTRICT OF COLUMBIA. Upon any sale within the 48 United States and the District of Columbia, this allowance shall not exceed the actual rail freight at carload rates as of March 31, 1942, for a vehicle of the same wheel base, shipping weight (actual or as listed in Appendix C), and overall size as the vehicle being priced, shipped by the most direct route from the principal place of manufacture of the chassis to the freight station nearest the seller's place of business. The principal places of manufacture of the chassis are listed in Appendix C. If the transportation charge cannot be ascertained in accordance with the foregoing an allowance of \$20 for transportation may be added to the "value when new".

(2) SALES WITHIN A TERRITORY OR POS-SESSION OF THE UNITED STATES. Upon any sale occurring in any territory or possession of the United States, the transportation allowance shall be the rail freight, calculated in accordance with subparagraph (1), from the principal place of manufacture of the chassis, determined as provided in subparagraph (1), to Seattle, Washington, for the sales in the Territory of Alaska; to San Francisco, California, for sales in any other territory or possession in the Pacific Ocean; to New York, New York, for sales in any other territory or possession, plus the cost of shipment in each case from such port to the seller's place of business at the rates in effect on October 1, 1941.

(d) ALLOWANCE FOR EXTRAS TO BE IN-CLUDED IN "BASE PRICE"—(1) WHEN ALLOW-ANCE MAY BE INCLUDED. An allowance for extras, in an amount of their "value when news" as determined pursuant to subparagraph (2), may be included in the "base price":

(i) UPON A SALE BY A PERSON OTHER THAN A DEALER, only for those extras with which the vehicle is equipped at the time of sale.

(ii) UPON A SALE BY A DEALER, only for those extras with which the vehicle was equipped when it was purchased by the dealer and with which it is still equipped at the time of sale. A dealer may make a charge for extras with which the ve-



OPA USED TRUCK PRICE CONTROL ★

hicle was not equipped when it was purchased by such dealer only if such extras were added at the purchaser's request, and in that case, the additional charge shall be determined in accordance with paragraph (b) of § 1360.507.

- (2) METHOD OF DETERMINING AMOUNT OF ALLOWANCE; "VALUE WHEN NEW" OF EXTRAS. 'value when new' of the extras shall be the sum
- (i) For all items of extra equipment with which the vehicle was equipped when it was first pur-chased for use, the manufacturer's original retail list
- (ii) For all other extras, the original retail price new, or, if such original retail price new is not ascertainable, then the current retail prices new in the area in which the vehicle is being sold (not to exceed applicable maximum prices), for the same or most comparable extras.
- (3) DEFINITION OF "EXTRAS". poses of this paragraph (d), and of paragraph (b) of § 1360.507, the term "extras" means any accessory or special equipment not included in the price of the vehicle and/or body used to determine the "value when new" of the vehicle. The term includes such items as oversized or special axles, oversized tires, special springs, special transmissions, special brakes, optional wheel base or body frames, eaters, and radios, and also includes machines nounted on the vehicle so as to be an integral part thereof, such as power-operated cranes, winches, shovels, scoops, welding equipment, and concrete mixers.
- § 1360.506 RECONDITIONED AND GUARANTEED USED VEHICLES SOLD BY DEALERS — (a) MAXIMUM PRICE. For any used commercial motor USED vehicle which has been reconditioned by a dealer and which has been guaranteed by such dealer in accordance with paragraph (c) of this section, the maximum price applicable to the sale of such vehicle by the dealer shall be the sum of subparagraphs (1), (2) and (3), except that in no event shall the maximum price for such reconditioned and guaran-teed vehicle exceed the price determined by applying to the "base price", computed in accordance with § 1360.505, the applicable percentage set forth in paragraph (b) of this section. Furthermore, this special price is not available if the vehicle has been used or rented after completion of the reconditioning
- (1) The price determined by multiplying the base price" computed in accordance with § 1360.505, by the appropriate percentage in the Table contained in paragraph (c) of § 1360.504;
 - (2) 5% of (1); and
- (2) The prices of any parts, materials and services needed and supplied by the dealer in reconditioning the vehicle for the purpose of sale, including dismantling for purposes of inspection. including dismantling for purposes of inspection.

 These prices must not exceed applicable maximum prices for such parts, materials, and services, when supplied by the dealer in the course of a repair job for a regular customer.
- (b) ABSOLUTE CEILING FOR RECONDITIONED GUARANTEED VEHICLES: TABLE OF PER CENTAGES. The maximum price for a reconditioned and guaranteed used commercial motor vehicle shall in no event exceed the price determined by applying to the base price, computed in accordance § 1360.505, the applicable percentage set forth below. In most cases, however, the maximum price determined in accordance with paragraph (a) of this section will be less than this absolute ceiling and will, accordingly, be the maximum price.

Age:													F	9	rc	ent
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More	than	6	mos.	te	12	mos	l								×	91
More	than	12	mos	. 1	0 1	18 1	no	5.		*						86
Mare	than	18	mos.	to	24	mo	L.									82
More	than	24	mos.	to	30	mo	i									78
More	than	30	mos.	to	36	mo	i									75
More	than	36	mos.	to	42	mo	i									73
	than															
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(c) GUARANTEE TO BE FURNISHED TO PUR-CHASER. No vehicle shall be sold at a price de-termined in accordance with this section unless the dealer shall furnish the purchaser with a signed guarantee in the form set forth in § 1360.521, Ap-A dealer may grant an additional guar pendix B. A dealer may grant an additional guar-antee, but the maximum crice shall not be increased A purchaser of such vehicle is advised to retain the guarantee furnished under this paragraph as well as the sales invoice, for use nection with a possible resale of such vehicle within one year of its purchase. (See § 1360.507 (a)).

(d) EFFECT OF DEALER'S FAILURE TO PER-FORM OBLIGATIONS OF GUARANTEE. If any dealer shall fail to perform his obligations under the terms of the guarantee provided for in paragraph (c) of this section, he shall be deemed to have violated the provisions of this regulation to the extent that the price charged exceeded the price determined under § 1360.504.

§ 130.507 SPECIAL CASES—(a) MAXIMUM PRICE FOR RESALE OF RECONDITIONED AND GUARANTEED VEHICLE WITHIN ONE YEAR AFTER PURCHASE AS SUCH. (1) Where a used commercial motor vehicle has been sold by a dealer after April 25, 1943, as a reconditioned and guarantee for the such as the such a vehicle at a price determined under § 1360.506 which is higher than the maximum price determined § 1360.504, the maximum price applicable to the resale of such vehicle by the purchaser thereof, within one year after his purchase, shall be termined as follows:

- (i) Take the original purchase price paid, not § 1360.506.
- (ii) Compute the maximum price of such vehicle, at the time of purchase, under § 1360.504.
- (iii) Deduct from item (i), one-twelfth of the difference between item (i) and item (ii) for each month which has elapsed from the date of the original purchase to the date of resale.

Upon delivery of any such vehicle at such a price the seller shall give to the buyer, in addition to the sales invoice or receipt required by § 1360.512, the sales invoice or receipt and the guarantee furnished to the seller by the dealer from whom he purchased the reconditioned and guaranteed vehicle.

- (2) Where a used commercial motor vehicle has been sold by a dealer after April 25, 1943, as a reconditioned and guaranteed vehicle at a price determined under § 1360.506 which is higher than the maximum price determined under § 1360.504, and where such vehicle shall have been repossessed upon default of the purchaser, the maximum price applicable to the resale of such vehicle by any person within one year of the original sale may termined either:
 - (i) In accordance with § 1360.504, or
- (ii) In accordance with subparagraph (1) of this paragraph (a).

but in the event that the maximum price is de-termined in accordance with method (ii) above, the maximum price may not exceed the amount of the portion of the loan, plus out-of-pocket expenses incurred in repossession or judicial proceed-ings. Any person electing to sell a vehicle at a price determined under method (ii) shall file with the Office of Price Administration, Washington, D. C., a of the sales invoice furnished the buyer, and following information: a summary of the major terms of the loan which gave rise to the repossession, terms or the loan which gave rise to the repossession, and the amount unpaid on such loan; and, if the vehicle is being sold by a dealer after repurchase from a finance company, the price paid to the finance company and a copy of the above report filed under this section by the finance company.

(b) MAXIMUM PRICE WHERE ALTERATIONS MADE OR EXTRAS ADDED BY DEALER AT PUR-CHASER'S REQUEST. Where a purchaser from a dealer requests that alterations, as distinct from reconditioning operations, be made in a used com-mercial motor vehicle, or that the vehicle be equipmercial motor venicle, or that the venicle be equip-ped with extras, the maximum price applicable to the sale of such vehicle by the dealer after the requested alterations have been made or the extras have been added shall be the sum of subparagraphs

- (1), (2) and (3). However, the prices for extras and for parts, materials and services supplied in making the alterations must be separately itemized on the sales invoice or receipt required by § 1360.512.
- (1) The maximum price for the vehicle without alterations or such extras, determined in accordance with other provisions of this Regulation, and
- (2) Prices for extras not to exceed applicable eximum prices. "Extras" are defined in paragraph maximum prices. "Extras" ar
- (3) Prices for parts, materials, and services sun-(3) Prices for parts, materials, and services sup-plied in making the alterations, not to exceed ap-plicable maximum prices for such parts, materials, and service when supplied by the dealer in the course of an alteration job to a regular customer of the same class of customers.

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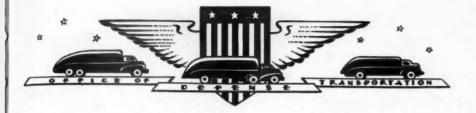
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- (c) MAXIMUM PRICE FOR THE SALE OF A VEHICLE WITHIN ONE YEAR OF ACQUISITION NEW AT NEW PRICE INCLUDING MAINTENANCE ALLOWANCE. Notwithstanding the provisions of § 1360.504, in the case of any used commercial motor vehicle which was purchased new at a price which included an adjustment for maintenance opera tions, in accordance with the provisions of paragraph (a) of Supplementary Regulation No. 14, such adjustment may be added to the "base price", upon the sale of such vehicle within one year of such nurchase new.
- (d) RENTAL CONTRACTS WITH "RECAPTURE CLAUSES"—(1) RENTAL CONTRACTS ENTERED INTO PRIOR TO EFFECTIVE DATE OF THIS REGU-LATION. Neither this regulation nor the General Maximum Price Regulation shall apply to any sale of a used commercial motor vehicle pursuant to a rental contract entered into prior to April 26, 1943, which provided for the transfer of title to the com-mercial motor vehicle upon the payment in rentals, over and above a monthly carrying charge, of an amount equal to the valuation of the commercial motor vehicle, as agreed upon at the time the contract was entered into.
- (2) RENTAL CONTRACTS ENTERED INTO AFTER EFFECTIVE DATE OF THIS REGULATION. In any rental contract of the same type entered into after April 25, 1943, the agreed upon valuation shall not exceed the applicable maximum price for the new or used commercial motor vehicle, determin the new or used commercial motor resides, sections as of the date of delivery of the vehicle under the contract. If title to the vehicle is subsequently transferred to the lessee upon the payment, over and above the monthly carrying charge, of an amount equal to such agreed upon valuation, the maximum price shall remain unchanged notwithstanding the fact that the vehicle may by that time have fallen into a different age group.
- § 1360.508 FEDERAL AND STATE TAXES. There may be added to the maximum price for any used commercial motor vehicle the amount of any federal tax and/or state or municipal tax upon, or incident to, the sale, delivery, processing or use of such vehicle. However, the amount of such tax must be stated separately upon the sales invoice or receipt required under § 1360.512.
- § 1360.509 LOWER THAN MAXIMUM PRICES. Lower prices than those established by this regula-tion may be charged, demanded, paid or offered.
- § 1360.510 EVASION. (a) It shall be a violation of this regulation in effect to charge a price above the applicable maximum price in connection with any sale of a used commercial motor vehicle, either alor or in conjunction with any other consideration even the price increase appears only indirectly. Specifically the seller is not permitted to require purchaser, as a condition of the sale or transfer the vehicle, to agree to make payment over a riod of time: to require him to finance the purchase through any lending agency, to require him to purchase any equipment, accessories, repairs, parts, or services so as to increase the total compensation the maximum price, to require him chase any other commodity or service, or to require him to make payment in whole or in part by ex-changing or transferring or trading in any other ve-hicle or other product or commodity. Furthermore, (TURN TO PAGE 112, PLEASE)



ODT NEWS

Unused First Quarter "T" Gas Coupons Must Be Turned In

First quarter "T" gasoline coupons are no longer valid and any commercial motor vehicle operator having unused ones should turn them in to his local War Price and Rationing Board, according to the ODT.

The ODT is currently conducting a general check of commercial vehicle operations in all sections of the country. In instances where an operator has used less gasoline than he was allotted for the first quarter, ODT representatives will inquire particularly into the disposition of unused "T" coupons.

Under ODT regulations, any failure to return invalid "T" coupons to ration boards may be considered "good cause" for the suspension or revocation of an operator's Certificate of War Necessity.

Temporary Transport Ration Issuance Discontinued April 1

The system of issuing temporary transport rations to commercial motor vehicle operators who are appealing their gasoline or mileage allotments was discontinued April 1 by ODT.

Appeals or requests for adjustment of Certificates of War Necessity may now be filed with ODT district offices in the regular manner. The only difference will be that the applicant will not be authorized to apply to his local War Price and Rationing Board for a temporary gasoline allotment to carry him while his appeal is being considered.

Temporary transport rations will hereafter be authorized only in cases where an operator has applied for his Certificate of War Necessity, but has not received it, and his application has not been denied.

War Construction Projects Get 21% of Rationed New Trucks

Twenty-one per cent of all commercial motor vehicles released for civilian use from the Nation's pool of new trucks in the first year of allocation, which began March 9, 1942, were purchased for construction work directly connected with the war effort, the ODT announced.

During the year, the WPB, on ODT recommendation, approved the release of 51,241 vehicles for civilian use. Of these, 8,330 were light trucks, 26,916 medium trucks, 7,889 heavy trucks, 6,630 trailers and 1,476 miscellaneous. Twenty-three per cent of the light, 23 per cent of the me-

dium and 18 per cent of the heavy trucks were withdrawn for war construction projects.

Leading the list of industries in the number of civilian permits issued were agriculture and logging, each of which was allocated 9.23 per cent of the number released.

Common carriers were granted 7.44 per cent of the vehicles released for civilian use. Fifty per cent of the trailers allocated went to for-hire carriers, many of them petroleum carriers.

Sixty-one per cent of all applications certified by local allocation officers were approved by the Allocation Section of ODT. Availability of other equipment to handle the jobs was given as the primary reason for refusing the other 39 per cent.

Requests for medium trucks led civilian demands during the year. Fifty-two per cent of all trucks released for civilian use were mediums; 18 per cent were light; 15 per cent were heavy trucks and 15 per cent were trailers.

The number of requests for permits received in Washington in the first quarter of 1943 topped those filed in the last three months of 1942 by more than 7,000, ODT officials said.

Master Certificate Should Be Presented by Fleets for Tires

In applying to local War Price and Rationing Boards for tires, tubes, and recapping service, fleet owners should bear in mind that they need not present the unit Certificate of War Necessity covering the vehicle to be serviced. The master CWN covering the fleet is sufficient, provided the owner certifies on the application form that he holds a unit certificate for the vehicle to be serviced and that he has complied with the tire inspection requirements of the ODT.

If, in applying for tires, tubes, or recaps, a fleet owner presents a valid unit certificate, he should have it returned to him immediately after the ration board has noted its presentation on the application form because the ODT requires the unit certificate to be on the vehicle while in operation.

Five Indiana Carriers Join to Conserve 120,000 Miles Annually

A joint action plan to conserve 300 man hours per week and 120,000 truck miles annually, submitted by five common motor carriers operating between Indianapolis and Lafayette, Indiana, was approved in a supplemental order issued by the ODT. As a result of the order, five complete tractor and semi-trailer units will be released for use in needed service elsewhere.

The order directs the carriers to consolidate their operations between Indianapolis and Lafayette by suspending certain of their duplicating services to intermediate points between the two cities.

Names of the five carriers affected by the order are: The Silver Fleet Motor Express, Inc., of Louisville, Ky.; Foster Freight Lines, of Indianapolis; Commercial Motor Freight, Inc. of Indiana, of Columbus, Ohio; Lafayette-Indianapolis Transit Co., Inc., of Indianapolis, and the Turner Trucking Co., of Lebanon, Ind.

Certificates and Rations May Not Be Transferred With Title

Certificates of War Necessity and "T" ration gasoline coupons may not be transferred along with titles to trucks or other commercial vehicles. The action directly violates General Order ODT 21, the ODT pointed out, and may be punished by suspension or revocation of Certificates.

New operators receiving a motor vehicle through transfer must file an application for CWN immediately upon the transfer. Operators who already hold Certificates must apply for revised Certificates, using Form CWN-5-S if a single unit operator or form 5-F if a fleet operator. Failure to file such applications may also result in suspension of the operator's CWN, the ODT said.

Single unit operators (operators of one or two vehicles) must return Certificates to their ODT District Offices and must surrender unused "T" coupons to their local War Price and Rationing Boards upon transfer. Fleet operators must advise the nearest ODT District Office of their action and return the appropriate Sub-Certificate.

Operations Reports of Fleet Operators Were Due May 1

ODT operations reports from operators of three or more commercial motor vehicles were due May 1, 1943. The reports are necessary to determine the amount of mileage conservation being effected.

If an operator fails to file his report within the 30-day period after each calendar quarter, he may find it difficult to obtain gasoline rations for subsequent quarters under ODT regulations, the ODT said.

Each operator should mail his report to his ODT District Office, the address of which is stamped in the upper right hand corner of the form.

Milk Dealers Must Conserve With Minimum Employee Hardship

The National War Labor Board has directed 27 Minnesota milk distributors to comply with all curtailments of truck mileage ordered by the Office of Defense Transportation, "in such a way as to produce the minimum of hardship to their employes consistent with these orders."

All of the companies operate in the

St. Paul-Minneapolis area. All of the employes are represented by the Milk Drivers and Dairy Employes Union, affiliated with the Teamsters Union, AFL.

In both cases, a mediation panel appointed by the NWLB conducted hearings on disputes arising from the union's opposition to alternate day deliveries, which the companies proposed as a means of meeting the ODT's order of last spring requiring a 25 per cent reduction in truck mileage.

The Board accepted the panel's recommendation that the Minneapolis companies and Local 471, "through the newly-created labor-management committee or any other method they may mutually agree upon . . . continually study the problem and work out plans for necessary curtailment of truck mileage with a minimum of hardship to the employes."

In the case of the St. Paul companies and drivers, where no labor-management committee exists, the Board directed that the parties in negotiations attempt to carry out the ODT order without unnecessary hardship to the employes.

In both cases, the Board directed that the curtailment of truck mileage should be deemed a subject for collective bargaining and in the event of failure of the companies and the union to agree upon the proper method of curtailment, the matter be referred to arbitration as provided for in the contracts between management and labor.

New Procedure to Speed Common Carrier Joint Action

Quicker action on joint action plans submitted to the ODT by common carriers in the motor truck field is expected as the result of a new procedure agreed upon by the ODT, the WPB and the Department of Justice.

To implement the new procedure a certificate has been issued by the Chairman of the WPB under which ODT is authorized to issue a special order putting a proposed joint action plan into operation if it conforms to a specific program for the conservation of motor carrier equipment.

Carriers operating under such an order are immune from prosecution under antitrust laws while the order is in effect if they continue to comply fully with its provisions.

There is no change in the procedure for setting up and submitting plans to ODT.

The several actions common carriers may take jointly to conserve and better utilize facilities, services, and equipment, upon issuance of an ODT special order effectuating a proposed plan, are:

(a) Alternate or stagger motor truck schedules between two or more points.

(b) Reciprocally exchange shipments of property between two or more points.

(c) Pool traffic, revenues, or both, between two or more points.

(d) Jointly load for transportation or operate a motor truck or trucks between two or more points.

(e) Divert traffic, operate joint terminals or joint pick-up or delivery vehicles.

(f) Establish arrangements with other carriers for the interchange of equipment.
(g) Appoint one of their own number or any other carrier to act as it or their

DEFICE OF PRICE SADMINISTRATION

OPA NEWS

Retail Milk Trucks Now Eligible for New Tires

Retail milk delivery vehicles perform a service necessary to the public welfare, the OPA said in announcing that on April 13 they were made eligible for replacement tires when their present casings are not recappable.

Heretofore they have been eligible only for recapping services and could not get replacements when their tires wore out. Since this situation has been found to interrupt necessary milk deliveries, these trucks have been transferred from the "B" eligibility list in the tire rationing regulations to the "A" list which includes vehicles which perform the most essential services and hence are eligible for tire replacements.

The change is made by Amendment No. 22 to Ration Order 1A—Tires, Tubes, Recapping and Camelback. Effective date of the amendment is April 13.

Truck Tire and Tube "Seconds" Priced Under New

Continuing to tailor the price regulations for new rubber tires and tubes more closely to needs of the industry, the OPA has established separate maximum wholesale and retail prices for factory "second" new rubber tires and tubes for trucks and passenger automobiles.

Applying to manufacturers' and private brands, the new prices are for tires and tubes which are less than perfect, and are based on discounts of 20 per cent for truck tires and 25 per cent for the rest, from the maximum prices for perfect new tires and tubes.

Previously there was no difference in maximum retail prices between perfect new tires and tubes and those classed as

Grade I and II Tires Lumped for 240-Miles-a-Month Cars

On information from Rubber Director William M. Jeffers that supplies of Grade II tires are inadequate to meet requirements of motorists eligible for them, the OPA acted to make passenger car drivers with mileage rations exceeding 240 monthly eligible for any grade of new tire when their present casings are not recappable. The ruling became effective May 1.

After May I, there will be no distinction between tires now in Grades I and II, and all new passenger car tires, those manufactured before Pearl Harbor and the reclaimed rubber casings made since, will be designated Grade I.

As before, motorists with mileage rations of 240 a month and less are eligible for used or recapped tires—Grade III's—when they need replacements.

Contract Carriers of Meat in 11 States Get 8% Rate Boost

Contract carriers transporting fresh meat, meat products and packing house products and supplies from points in 11 states were allowed to increase their maximum charges by not more than 8 per cent by the OPA.

OPA explained the action was taken because of steadily mounting costs which threatened to drive the carriers out of business. Surveys indicated that the carriers are performing a vitally needed service and if they went out of business the facilities of other carriers, already overtaxed, would be still further overloaded.

The action covers charges for shipments originating in Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio. South Dakota, West Virginia or Wisconsin.

Carriers who take advantage of the new ceiling must file detailed quarterly reports on costs and profits.

individual, common, or joint agent to concentrate, receive, load, forward, unload, distribute, and deliver property; receive, account for, and distribute gross or net revenues therefrom, or otherwise handle or conduct the carrier's business as common carriers of property upon reasonable terms and conditions.

JIO Backloading Jumps 100% in Four-Month Period

The volume of motor freight directed by Joint Information Offices to trucks that

otherwise would have traveled empty, surged upward in the past four months and is expected to increase steadily during the remainder of the year, the ODT reports.

remainder of the year, the ODT reports. In December, 1942, backloads totaling 8,537 tons were channelled through the 32 Joint Information Offices in operation. In January, the freight backloaded by the same 32 offices increased to 8,893 tons, and in February the total reached 19,513 tons. Complete figures for March are not yet available, but indications are that the March total was substantially above that for February.



.. has meant Exide since 1928 to this company



Thas always been important, to the Nassau Utilities Fuel Corporation, to keep operating costs low by purchasing only the best and longest-lasting equipment. In the storage battery field, this has naturally meant Exide. Since 1928, states the Nassau Utilities Fuel Corporation, Exide Batteries have given completely satisfactory service . . . with an average estimated life of 26 months per battery.

Much the same report about Exide Batteries is given by other commercial operators, both large and small. Exide Batteries, because of low maintenance cost, sturdy construction, and complete dependability, are proving their worth in every type of commercial car and truck. When you buy an Exide, you Buy to Last. Take care of them and you'll Save to Win.



Exide EXTRA DUTY BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia

Exide Batteries of Canada, Limited, Toronto



WPB NEWS

Revised Version of PD-1A Form Only One That Will Get Action

Business firms and individuals who normally apply for priority assistance on Form PD-1A are warned by WPB officials that henceforth only applications made on the revised version of that form issued January 16, 1943, will be considered.

The new form is printed in two colors, yellow to be used in applying for preference ratings for items to be exported without further processing in the United States, and white for all others.

PD-1A applications must be filed with the field office nearest the person seeking priority assistance. To send them directly to Washington entails delay in final action.

P-100 Preference Rating Order Revoked in Favor of CMP No. 5

Preference Rating Order P-100, general repair, maintenance and operating supplies order, has been revoked by the WPB. The action is taken in view of the fact that producers who formerly used the ratings assigned under P-100 are permitted to operate within the terms of CMP Regulation No. 5.

CMP Regulation No. 5 assigns a preference rating of AA-1 to producers covered in its Schedule I, AA-2X to those covered in Schedule II, and an A-10 rating to business activities not mentioned in either schedule.

System of Free Distribution Continued in Automotive Items

Automotive replacement parts and automotive maintenance equipment have been removed from the list of items to the purchase of which preference ratings, assigned under Controlled Materials Plan Regulations Nos. 5 and 5A, may be applied, the WPB has announced.

The action with respect to automotive replacement parts was taken in order to restore the system of free distribution of parts which existed prior to the issuance of the CMP maintenance, repair, and operating supplies regulations. This is necessary, according to officials of the Controlled Materials Plan Division, because not all essential transportation operations were assigned equal ratings under regulations. For example, public transportation companies were assigned an AA-1 rating, while agricultural transportation was assigned a lower rating. This gave public transportation preference over agricultural

transportation in securing automotive repair parts. It is considered preferable to place all motor carrier transportation on an equal footing with respect to securing repair parts. This does not affect the requirement, however, that used parts be turned in when new ones are purchased.

Control Over Transfer of Milk Tank Truck Assumed by WPB

To control serious transportation shortages which have developed recently in the milk sheds of New York, Wisconsin, Minnesota and elsewhere, the WPB issued Limitation Order L-1-j prohibiting the transfer, without authority from the WPB, of fluid-food tank trucks and trailers and fluid-food tank tractors. The order is intended primarily to stop the movement of tank equipment out of the milk sheds.

The order requires that any person wishing to transfer any vehicle of the type defined in the order must apply to the Automotive Division of WPB on Form PD-556. On the basis of this information the WPB in consultation with the ODT and the Department of Agriculture will determine whether or not it is in the public interest to permit the transfer, taking into consideration the use in which the vehicle is being operated and the use to which it is proposed to transfer it.

Trucks Get a "Priority" on Ethylene Glycol Anti-Freeze

Purchase for civilian passenger automobiles, including station wagons and taxicabs, of anti-freeze containing ethylene glycol was prohibited by the WPB through issuance of Limitation Order L-51 as amended. Civilians, therefore, will only have available the ethylene glycol antifreeze they have on hand. Purpose of the amended order is to restrict this "permanent type" anti-freeze to commercial vehicles and stationary engines. The amended order is effective from April 1, 1943, to March 31, 1944.

122,723 Commercial Vehicles Released as of April 17

Since the rationing program became effective March 9, 1942, a total of 122,723 vehicles of all types has been released as of April 17, according to the Automotive Division of WPB. This total included 29,708 light, 66.663 medium, and 15,586 heavy trucks; 9,525 trailers, and 1,241 attachment third axles.

Trailer Group Cites Farm Need; Urges Standardization

An increasing shortage of trailers to handle farm produce was reported by the Truck Trailer Industry Advisory Group.

The committee recommended that future production of trailers be confined to five types as far as length and tonnage are concerned.

Shop Equipment Manufacture Restricted in Varying Degrees

The WPB has imposed restrictions on the manufacture of various shop equipment items used in the repair and maintenance of automotive vehicles.

Sale, transfer or delivery of maintenance equipment by producers is restricted to purchase orders bearing a preference rating of AA-5 or higher. Consumers are not required by the order to furnish a preference rating when purchasing from a distributor.

The Limitation Order, L-270, provides for the following restrictions on and after April 30, 1943:

1. Prohibits the production of thirty separate items of automotive maintenance equipment listed in Schedule A attached to the order. Among the items listed are elaborate garage equipment such as combustion analyzers, frame straightening machines, gasoline mileage testers, etc.

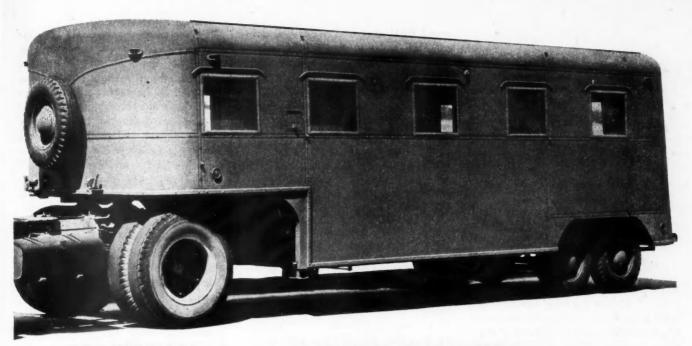
2. Limits production of 42 items listed in Schedule B to 20 per cent of amount sold during a base period of 1941. Schedule B lists axle-bending bars, front-end combination inspecting machines, tire pumps, 4- and 10-ton shop jacks, etc.

3. Permits production equal to 75 per cent of the number sold in the base period of 1941 of the 34 items listed on Schedule C. Comprising the list of 34 items are:

Air pressure gages (pencil type and truck service type), align reamers, anti-freeze testers; battery hydrometers, brake drum gages, brake drum grinders, brake drum lathes; clutch rebuilders, compression gages, connecting rod aligners, connecting rod grinders, connecting rod reamers, crankshaft grinders, cylinders boring bars, cylinder grinders, cylinder hones, cylinder ridge reamers; jacks (service-portable type, hydraulic or mechanical-3, 5, 8, 12 and 20-ton capacity); main bearing boring equipment; piston grinders, piston pin grinders, piston pin hones, piston pin reamers, pressure plate grinders: ring gear riveters; timing lights, transmission jacks; vacuum gages, valve grinders, valve guide reamers, valve refacers, valve seat insert tools, valve seat insert grinders, valve seat reamers.

New Utility Order Excludes Priority on Automotive Items

A new certification form to be used by electric, gas, water and steam utilities on their purchase orders for maintenance, repair and operating supplies is provided in Utilities Order U-1, as amended by the WPB. However, preference ratings assigned to U-1 may not be used to obtain automotive replacement parts or maintenance equipment.



THESE 4 ADVANTAGES OF THE LS METHOD OF STEEL CONSTRUCTION Speed Up Production of Combat Bodies

LS COMBAT BODY BUILDERS

CAN BE FIRST TO

SUPPLY BODIES FOR DOMESTIC

USE AFTER THE WAR



Manufacturers who are now making Lindsay Structure combat bodies can go into domestic production overnight. No retooling. They will be in a position to supply your requirements quickly after the war.

Lindsay Structure—the modern method of light steel construction—is the ideal way of producing more combat bodies—faster. It . . .

SAVES STEEL by utilizing the great strength in light sheet metal. High strength-weight ratio makes possible steel savings up to 35%.

SAVES TOOLING UP—Lindsay Structure units are completely prefabricated to exact size and shipped knocked down for quick assembly in the plant.

SAVES SKILLED LABOR—Parts are die formed and die cut to exact dimensions. Assembly is fast—by untrained workmen. No welding, no riveting, no waste of time or material.

SAVES PRODUCTION DELAY when there are sudden changes in design. No retooling necessary—new sizes or shapes can be started overnight.

Lindsay Structure mobile command posts, workshops, dental laboratories, and transports are seeing service on many fronts. Their uniformity, ease of repair, compactness in shipping, and ability to withstand heat, humidity, and termites have proved this type of construction ideal for service in a global war.

Lindsay Structure engineers will render immediate service to body builders on pilot jobs for war equipment. Phone or wire for information. Lindsay and Lindsay, Adams-Franklin Bldg., Chicago, Ill.; or 60 E. 42nd St., New York, N. Y.

LINDSAY |s STRUCTURE

U. S. Patents 2017629, 2263510, 226351
U.S. and Foreign Patents and Patents Pending
For details, see Sweet's Catalog File

LINDSAY STRUCTURE CAN SAVE THOUSANDS OF TONS OF STEEL PER MONTH



WASHINGTON RUNAROUND

(CONTINUED FROM PAGE 35)

ment parts. WPB issued regulation CMP 5 giving for-hire carriers an AA-1 priority. Immediately the farmers descended upon WPB with everything but pitchforks. WPB recanted by amending the regulation and returning automotive replacement parts to the system of free distribution. It is understood that the ODT maintenance section opposed the original regulation.

On Order: 38,000 Trucks

Around the ODT there is optimism that WPB will soon grant permission for the manufacture of more trucks and trailers. ODT has made definite recommendations for the 18 months beginning July 1 which include approximately 38,000 medium and heavy trucks and 16,000 trailers. There is an expectation that of this number 7500 heavy trucks and about 3000 trailers will be built during the remainder of this year. At any rate ODT has made its recommendations and the responsibility rests with WPB. The intentions of WPB will probably be brought to light when the Truman Committee makes its investigation and report of the parts and vehicle shortage. This Senate committee is now gathering facts and may hold hearings and call witnesses some time in May.

Of "V" (Pennants) We Sing

The unofficial opinion is that the ODT V-pennant scheme permitting speeds in excess of 35 miles per hour in emergencies is a bust of super proportions. In all of the United States during the last week of March just 56 requests were made for the use of such pennants. Another unofficial opinion is that trucks generally are not adhering to the 35-mile

speed limit and that wise operators take the position that a V pennant waved at cops would simply call attention to the fact that their non-emergency runs, at the same speed, are excessive. If the pennants continue to be ignored the financial loss involved in making pennants available will not be incurred by ODT. It will have to be written off by the American Trucking Associations as an investment in cooperation. The wise guys say a few thousands were laid out.

ODT Studies Speed Limit

This controversial 35-mile speed limit soon will be officially disposed of. Late in April the ODT began a series of tests between Burlington, N. C., and Baltimore. (Incidentally we had this bit of news last month but withheld it at ODT's request . . . with the usual result. On April 19 the Governor of Maryland "spilled the beans" to newspapers.) ODT was to test six tractor-trailer combinations at 35 m.p.h.; six at 40 m.p.h., and 12 at 50 m.p.h., unless somebody changed his mind and made it 45. It is our guess that half of the 50-mile group will run on tires made of synthetic rubber. Most of the data to be compiled is similar to that worked up by the Associated Transport fleet and published in the April issue, page 174. AT's conclusions showed the 35-mile speed defeated conservation aims. Question: How can ODT's findings greatly differ since the trucks and the routes used in the test are those of Associated Transport? Answer: They probably won't. But undoubtedly they'll be more scientific and will be official.

What's Cooking in ODT

The ODT is reported to be cooking up a joint action plan for local operators in the for-hire field. . . . The simplified reporting form (for fleets only) is in the review stage and should be released in time for second quarter use. The simplified form requires quarterly figures only for gasoline, mileage and loads. These would be lump figures for the entire fleet. . . . Revised ODT 17, calling for every other day deliveries by retail delivery trucks, is being circulated among the various divisions and is encountering some opposition. It is being attacked as an impractical way of accomplishing the desired savings. The National Council of Private Motor Truck Operators continues to press for adoption of the revised order, although a slight cleavage has occurred in its ranks. Bakery operators don't like the cut to every-other. day and are asking for an exemption to five days. . . . It looks as if ODT would get a slightly larger appropriation than last year, but not as much as was requested of the Budget Bureau. . . . Late in April ODT was disappointed in the number of operation reports filed for the first quarter under terms of ODT 21. May 1 was the deadline.

Surplus Coupons Invite Cops

The excessive allotment of gasoline to truck operators who overestimated their needs under the Certificate of War Necessity continues to concern ODT. Issuance of temporary transport rations has been discontinued and the heat is being put on operators to return surplus first-quarter coupons. One operator turned in coupons worth 200,000 gallons. There is talk of prosecuting some operators to make examples of them. Fleet operators whose mileage reports are out of line with their gasoline allotments are in for questioning if surplus coupons have not been turned in. Some heads in OPA are overdue for examination for issuing second-quarter "T" coupons of the same color as the first. It is claimed a different color would have simplified the surplus coupon problem. The problem is No. 1 on the "21" parade. One of the smaller ODT districts checked up and found an excess allotment of 1,000,000 gallons in the first quarter. One operator accounted for 18,000 gallons.

Manpower "Freeze" Thaws

If anyone can figure out the meaning or the how-will-it-work of the recent so-called manpower "freeze" he's a better man than Gunga Din. Give it a month to thaw out, as it is now doing, and become intelligible.

END

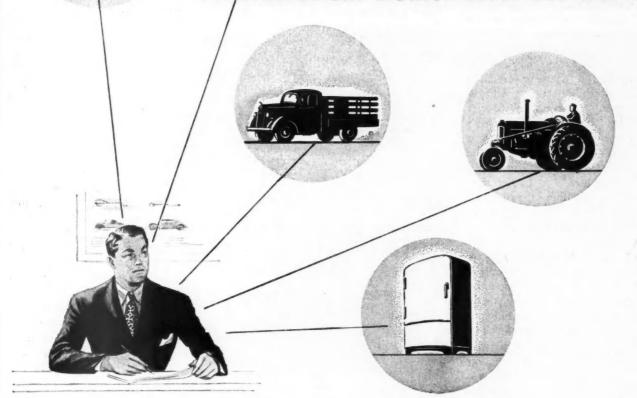
(Please resume your reading on P. 36)

K. B. MacDonald Elected President

K. Bruce MacDonald has been named president of the Buffalo Pressed Steel Company, Inc., Youngstown, Ohio, manufacturers of Buffalo Mufflers and Buffalo Oil Filters, succeeding C. A. Sheldon.



Who will be the Successful Car Dealer after the war?



The answer is simple... He will be the man who used to be an exclusive passenger car dealer or repair shop owner... but who learned one valuable lesson during the war.

Maybe he learned that lesson from a big manufacturer . . . maybe he learned it from his hardware dealer . . . maybe he learned it from his own experience in building up side-lines to see him through the war.

The lesson is, of course, that sooner or later the man with only one product or one line to sell gets into trouble. The old story of all your eggs in one basket!

The post-war automotive dealer will be a real merchant with cars, trucks, airplanes, tractors, motorcycles, bicycles, with parts and service, with everything for transportation for sale.

How are you planning to make money after the war?



MACK TRUCKS, INC.

Dealer Department, Long Island City, New York.



CONSUMERS HELP CONSERVE MILEAGE

(CONTINUED FROM PAGE 55)

some are being used as long as 18 months. Normal replacement rate for the entire fleet formerly was 10 or 12 tires a month. It has now been reduced to one tire a month.

Despite a greatly increased clientele, a delivery service in Kansas City with 135 retail stores on its roster cut delivery truck mileage a full 50 per cent. One of the stores utilizing the delivery service reported an 18,000-item reduction in

package deliveries.

In Louisville, a delivery service with 150 retail clients, with all stores reporting a considerable increase in volume of business in 1942, showed a decrease of more than 42 per cent in mileage with attendant gasoline savings of 43 per cent. The largest of Philadelphia's delivery services reported almost a million miles saved through the carrying of small packages and other economies and with a 25 per cent reduction in gasoline. These savings were accomplished, according to officials, in spite of the fact that Other cities reporting included:

Atlanta, Ga.: A specialty shop reported that mileage dropped about 50 per cent in the two months after the campaign got under way with a corresponding reduction in gasoline and number of packages delivered. The department store canvassed showed an estimated 49.8 per cent reduction in the first quarter of 1943 under the same 1941 period, a 55 per cent reduction in packages delivered, and a 63 per cent reduction in gasoline.

Baltimore, Md.: Officials of a large popular-priced department store reported that deliveries are running less than 50 per cent of the prior year in spite of increase in over-all sales volume." A men's store have dropped from 44,644 to 31,085. A high-priced department store reported that, in a six-month period, 275,000 shopping bags have been used by their customers.

Boston, Mass.: An over-all reduction of nearly 50 per cent in parcel deliveries was reported along with steadily decreasing delivery mileage. Three stores reported gasoline savings up to 35 per cent.

Buffalo, N. Y.: A local delivery service, delivering for eight large

downtown stores, reduced mileage about 35 per cent and carried 45 to 50 per cent less packages in its trucks. Gasoline savings accordingly

dropped 60 per cent.

Chicago, Ill.: One large department store in the city has carried on a consistent package-carrying campaign through ads, store signs, and instructions to the sales force. To encourage carrying, the store sells a cotton net bag for a nominal sum; 10,000 of these were sold the first week they were displayed to the public. Mileage has been reduced here by about 35 per cent while package delivery has been cut in half. A large specialty grocery store in the downtown area has cut average mileage by a third and reduced package delivery by 20 per cent.

Denver, Colo.: Denver's second largest store and its high-fashion store reported consistent reductions in mileage and a 25 to 35 per cent reduction in packages delivered in spite of larger volume due to Denver's population rise. During 1943, officials estimate 50,000 less gallons of gasoline will be used. A firm delivering for a popular-priced store

Property of the second of the

The Schwandt sisters — Bernice, age 20, and Betty, 18—of Markeson, Wis., are doing their bit in wartime transportation. Since last June they have been hauling livestock all over Wisconsin, under all kinds of weather and road conditions. Bernice drives a pick-up truck with a 20 ft. Fruehauf trailer, while Betty drives a single truck



What is said to be the largest donation of blood from any single Chicago group of office employees, is being made to the Red Cross by the general office personnel of the International Harvester Co. A total of 555 volunteered for their first donation and will return periodically to the blood bank as permanently enlisted donors. C. E. Stevens, manager of IHC's War Materials Division, is shown taking tests prior to donation.

and several other retail concerns estimated that mileage savings of over 200,000 will be accomplished in 1943. A downtown grocery store stated that mileage for January through March of this year is 8,625 miles as against 23,250 miles in the same period of 1942.

Detroit, Mich.: This city's largest department store reported continuing decrease in mileage due to packagecarrying and other changes in delivery schedules. Reduction in mileage is now about 55.5 per cent as compared with previous years. Number of packages delivered dropped from 10,477,772 to 6,424,649. Gasoline savings were 41.7 per cent. Another store reported that delivery mileage has been reduced about 75 per cent. Today, 20 trucks are servicing routes that required 65 trucks a year ago and are carrying only large, bulky merchandise. A third store reported package deliveries dropped from 80,000 to 49,000.

New York, N. Y.: One of New York's largest department stores stated that gasoline used has de-

creased 35.4 per cent.

Another large popular-priced store reported a 35 per cent reduction in deliveries, with nearly all deliveries now consisting of heavy household goods. A luxury-trade specialty shop showed a 25 per cent reduction in package delivery.

Pittsburgh, Pa.: One high-priced store reported: delivery mileage cut 39 per cent since start of campaign; packages reduced by 30.6 per cent; gasoline consumption 34.8 per cent less than last year. From the popular-priced store: 22 per cent less delivered during the past year; mileage reduced by 31 per cent; gallons of gasoline used cut by one-third.

San Francisco, Cal.: A large department store handling its own deliveries reported a 42 per cent decrease in package delivery since the "carry your own" program was instituted, with a drop from 854,713 items to 485,890. Both mileage and gasoline consumption have been reduced more than 40 per cent. Two delivery companies servicing the other major downtown stores of the city reported mileage reductions of 35 and 45 per cent, with an average drop of 43 per cent in delivery of small packages. One company using 101 trucks in 1941 now uses but 60. END

(Please resume your reading on P. 56)

CHANGING THE COASTLINE...

"somewhere in Newfoundland"

millions of tons of stern sub-Arctic soil . . . ranging from rocky shale to peat swamps 25 feet in depth . . . are being moved and leveled by one of history's largest armadas of earth moving equipment . . . including a fleet of fifty Super Power White trucks.

25

st

g

18

The project . . . nearly completed . . . will, literally, change a remote part of the coastline of Newfoundland and provide a new U. S. Naval Air Base of tremendous strategic importance.

The men responsible for completing this vital work in record time would give a lot to have access to the complete service facilities which your nearby White Branch or Dealer has ready to protect your all but irreplaceable motor truck for the duration. Now, all trucks are vital transportation links in a wartime economy. If yours are not protected by a definite conservation plan, your White representative will gladly give you the details of one which has already proved itself in thousands of cases, capable of extending truck life and saving critical parts materials.

THE WHITE MOTOR COMPANY . CLEVELAND

Builders of U. S. Army Tank Destroyers, Scout Cars, Half-Tracs, Prime Movers and Cargo Trucks, the complete line of Super Power Trucks and Tractors, City and Inter-City Coaches, Safety School Busses and the Famous White Horse.



FOR MORE THAN 40 YEARS THE GREATEST NAME IN TRUCKS

Count the Rolls_ the Rolls count!



★ When you want long, dependable service in a tapered roller bearing, don't overlook the importance of the rolls.

It's the rolls that carry the load. Other things equal, the bearing with more rolls carries more load—lasts longer—gives better performance.

That's why there's a growing preference for Tyson Cageless Bearings for heavy-duty service in industry and essential transportation. Size for size, Tyson Bearings have more rolls—the raceway is *completely filled* with load-carrying rolls. They have longer life, more capacity, maximum rigidity.

You'll go farther with Tyson.

TYSON BEARING CORPORATION



MASSILLON, OHIO

SON HEAVY-DUTY BEARINGS

Tyson products also include precision parts for America's airplane engines

PL

for

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to

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Perfect Circle Introduces Survey Plan for Engine Maintenance

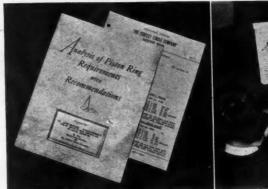
The problem of improving performance in trucks, buses, and other fleet units which cannot be replaced for the duration is being rapidly solved, in the opinion of The Perfect Circle Co., as more and more fleet maintenance superintendents take advantage of the new Perfect Circle Survey Plan for Fleet Maintenance. This new plan makes it possible to choose the right combination of piston rings for each unit in the fleet, for each make and model, for the particular condition of every engine, and for the specific type of service to which any engine is subjected.

To assure the efficiency of the new survey plan, Perfect Circle engineers carry on continuous laboratory and field-testing programs with all types of fleets. Results of this research, which has been diligently maintained over many years, emphasize that no one type of piston ring combination can possibly produce the best results in all engines under all conditions. Perfect Circle has developed 17 different types of compression rings and 11 different types of oil rings from which more than 100,000 workable combinations can actually be formed.

Obviously, the task of testing all of these 100,000 combinations is impossible. Nevertheless, Perfect Circle engineers have carried on such extensive testing work that they can recommend those combinations which have worked out most satisfactorily for most fleet units under a wide variety of services. All specifications and recommendations are individually prepared for every unit in each fleet availing itself of this service.

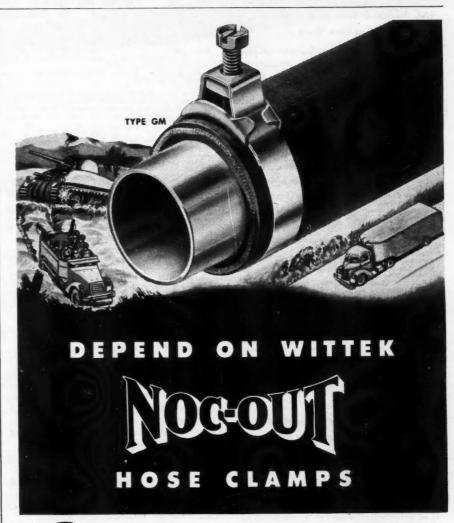
In operation, the survey plan for fleet maintenance evolves itself around a survey of the fleet for which recommendations are to be made. This survey covers such factors as the make, model, number, and type of service of each engine and vehicle in the fleet. From this data Perfect Circle engineers develop an analysis of the fleet's piston ring requirements. This is submitted, together with recommendations of definite numbered sets of Perfect Circle Piston Rings for each engine in the fleet.

With this new plan, it is stated that it is possible not only to step up performance in all units of a fleet but also to obtain longer service from piston rings, pistons, and cylinders.





Above, example of an analysis and a Perfect Circle Engineer explaining gas and oil economies





Type A—Adjustable For Replacement.

The standard of the industry. Quicktightening, perfect leak-proof hose connections, for original equipment and replacement. For Radiator, Heater, Booster Brakes and High Pressure hose connections. Wittek Manufacturing Co., 4305-15 W. 24th Place, Chicago, Ill.



Type HP—For High Pressure Requirements.

WITTEK NOC-OUT HOSE CLAMPS



CCJ NEWSCAST

SAE National T & M Meeting May 5 and 6 at New York

Techniques of commercial and military motor vehicle operation and maintenance in wartime, from cold welding to women drivers, appears on the program of the SAE National Transportation Meeting to be held May 5 and 6 in the Hotel Pennsylvania, New York City. The detailed program follows:

Wednesday morning, May 5: WOMEN DRIVERS
Chairman, D. K. Wilson, Superintendent of Automotive Equipment, New York Power & Light Corp.,
Albany, N. Y.
Heavy Duty Trucks, M. A. Savin, of Savin Express
Co., New London, Coan.
Delivery Trucks, Robert J. Gayley, of Supplee-WillsJones Milk Co., Philadelphia, Pa.
Wednesday afternoon: FIELD MODIFICATION OF
ORDNANCE VEHICLES
Chairman, Austin M. Wolf, consulting engineer,
New York, N. Y.
Speaker, Lt. Col. Harry O. Mathews, Tank-Automotive Cenner, Detroit.
Wednesday erening: DINNER SESSION
Toastmagter, Austin M. Wolf.
Greetings: Herbert Happersberg, chairman, SAE
Metropolitign Section.
"Ordinance Field Service—The Connecting Link between Producer and Soldier," Brigadier General Julian
E. Histcher.
Thursday morning, May 6: PARTS RECLAMATION.
Chairman, E. P. Gohn, automotive engineer, The
Atlantic Refining Co., Philadelphia, Pa.
Cold Welding, A. B. Tincher, of Kerkling & Co.,
Bloomington, Ind.
Fleet Experience with Metal Spray, H. I. Sullivan,
Superintendent of Rolling Stock, Eastern Massachusetts
Street Railway Co., Boston, Mass.
Thursday afternoon: PARTS OUTLOOK
Chairman, S. G. Page, General Superintendent,
Equitable Aute Co., Pittaburgh, Pa.
Wartime Replacement of Parts, Robert M. Cass,
Chief Engineer, White Motor Co., Cleveland, Ohio.

Annual ATA Meeting to Be Held May 21-22 in Cincinnati

The Fourth Annual Spring Meeting, Safety and Operations Section, ATA, will be held on Friday and Saturday, May 21-22, 1943, at the Netherland Plaza Hotel, Cincinnati, Ohio.

The preliminary program is scheduled as follows:

Friday, May 21

9:30 A. M.
Address of Welcome, Mayor James G. Stewart of Cincinnati.
Manpower Session, Discussion of their activities and

Cincinnati.

Manpower Session, Discussion of their activities and services available to the industry by representatives of Government Agencies dealing with manpower ques-

of Government Agescies dealing with manpower questions.

Lt. Col. Guiton Morgan, Regional Field Officer, Selective Service WMC.

George W. Cross, Chief Employment Service Specialist, U. S. Employment Service.

Miss Dorothy Sells, Chief, Personnel Supply Section, Division of Transport Personnel, ODT.

Lloyd H. Taylor, Training Within Industry Division, WMC.

L. S. Hawkins, Director, Vocational Training for War Production Workers, U. S. Office of Education.

12:30 P. M.

Luncheom—OPA rationing and other regulations

OPA rationing and other regulations of Trucking Industry (Speaker to be an-

Luncheon—OPA rationing and ourse to be anaffecting the Trucking Industry (Speaker to be announced),
2:30 P. M.
Parts and Equipment Session—Discussion of activities
of various Government Agencies dealing with parts and
equipment questions.
M. E. Ksne. Chief Allocations Section, Division of
Motor Transport, ODT.

William Cummings (Tentative), Chief, Maintenance Section, Division of Motor Transport, ODT.
Alvin S. McEvoy, Associate Director, Division of Motor Transport, ODT.
J. J. Donovan, Assistant Director, Automotive Division, WPB.
C. F. Wismeyer, Chief, Automotive Field Service, Automotive Division, WPB.
Representative of the Highway Division, Army Transportation Corps.
8:30 P. M.
An evening devoted to showing of motion pictures and sound-alide film recently developed for purposes of conservation and personnel training. Approximately 15 such films will be partially shown and explained. Saturday, May 22

9:30 A. M.
War Time Accident Trends—Group discussion by:
George B. Wellington, Chief, Section of Safety,
Bureau of Motor Carriers, ICC.
Rufus Jasper, Fleet Safety-Engineer, National Safety

Council, C. O. Gile, Assistant Safety Engineer, Bruce Dodson & Co. War Time Personnel Relations—(Speaker to be

announced),
Standard Maintenance Practice Instructions—Willard
J. Lord, Atlantic Refining Co.
12:30 P. M.

12:30 P. M.

Luncheon—What the Trucking Industry is Doing in the War Effort (Speaker to be announced).

2:30 P. M.

Open Forum Discussion of Industry Problems.

This discussion will be opened by three very brief presentations of what ATA is doing on particular problems.

Manley Head, ATA Manpower Specialist.

Walter Belson, ATA Rubber Specialist.

Charles G. Morgan, Jr., ATA Parts and Equipment Specialist.

U. S. Court Enjoins Freightways and Associates to Dissolve

Attorney General Francis Biddle announces the entry, in the U. S. District Court at San Francisco, of a consent decree enjoining further violations of the Sherman Anti-Trust Act by a corporate association of motor carriers known as "Freightways," ten associated carriers, and 32 of their officers. The decree was signed April 14 by Judge Michael J. Roche.

Corporate defendants involved in the decree were: Freightways, with headquarters at Salt Lake City; Consolidated Freightways, Inc., Portland, Ore.; Canadian Freightways, Lethbridge, Alberta, Can.; Pacific Intermountain Express Co., Salt Lake City; Phoenix Blue Diamond Freightways, Los Angeles; Salt Creek Freightways, Casper, Wyo.; Savage Transportation Co., Inc., San Francisco; Union Transfer Co., Omaha, Neb.; Wilson Freightways Limited, Edmonton, Alberta, Can.; Mitchell Brothers Truck Line, Portland, Ore., and L. J. Russell Transportation Co., Douglas, Wyo.

The decree, entered after a trial lasting several weeks, provides for the liquidation and dissolution of "Freightways" and the opening to all motor carriers of all gateways heretofore closed, as well as the removal of any and all tariff restrictions adopted to effectuate the closing of such gateways.

(TURN TO PAGES 72 & 148, PLEASE)





have been named Director of Defense Activities and Manager, Manufacturers Sales, respectively, in accordance with an annuncers and Manager, Manufacturers Sales, respec-tively, in accordance with an announcement issued by R. L. Morrison, Vice President and General Manager of the Bendix-Westinghouse Automotive Air Brake Company of Elyria, Ohio. Both Howe and Leukhardt are veterans in the field of Air Brakes and Air Controls, each having approximately twenty years' experience with the industry.



R. W. (Dick) Cochran for the past two years St. Louis Man ager and long identi-fied with the White Motor Co., has been appointed Los Angeles Branch Manager for White. Cochran's 22 ccessful years with White and wide ac-quaintance in the West, particularly qualify him for the





L. Fred Iverson, 61, purchasing agent of the Sealed Power Corp., Muskegon, Mich., died at his home on March 17. He had been associ-ated with the company since 1916.



When Captain E. V. Rickenbacker visited the When Captain E. V. RICKENDUCKET VISITE Marmon-Herrington Co. recently he met many old Speedway friends. Greeting him above are Col. A. W. Herrington and Bill Endicott, veteran 500-miler.

MIDLAND CHRISTENSEN BRAKES POWER BRAKES

For Safety! For Economy!
For Dependability! You need
MIDLAND'S
3 EXCLUSIVE FEATURES



BIG 7.3 CU. FT. COMPRESSOR For Double Air Capacity

BUS TYPE
TREADLE VALVE
For Perfect Control



YOUR CHOICE

of cylinders or diaphragm chambers for Super Power Ask your distributor about the

MIDLAND

Brake Surety Plan

and

MIDLAND

Power Brake Kits



"Those Who Know POWER BRAKES... Choose MIDLAND"

The MIDLAND STEEL PRODUCTS CO. WEST 106th & MADISON AVENUE . CLEVELAND, OHIO



by ROBERT F. BAHL

(Correct Answers on Page 153)

What's in a name? It's liable to be most anything, especially if it's the name of a truck. This month's CCJ Quiz poses 10 questions about truck names. Try to score a 100, giving yourself a credit of 10 points for each correct answer. Answers are on page 153.

Your Chevrolet truck is named after Louis Chevrolet, who was......

- a. A French explorer.
- b. An auto race driver.
- c. A financier.
- d. The first president of the company.

2.

Reo trucks take their name from

- a. James T. Reo, founder of the company.
- b. The initials of Ransom E. Olds.
- c. A town in Michigan.
- d. Gabriel Reoncavallo.

One of these is named after a city. Can you pick it out?

- a. Brockway.
- c. Corbitt.
- b. Oshkosh. d. Gramm.

4.

Can you tell us what the "T" stands for in the name "Diamond T"? It stands for

- a. Truck. b. Trade-Mark.
- c. Tilt. d. Tandem.

5.

Claimant to the first motor truck ever built is the Pittsburgh Motor Vehicle Company, which was the original name of.....

- a. Autocar. c. Ford.
- b. Mack. d. International Harvester.

To get credit for this question, you'll have to connect the name "FWD" with

- a. Franklin W. Dodge.
- b. Forward.
- c. Four Wheel Drive.d. Ford Western Division.

Remember the "McCormick reaper" you studied about in grade school days? Descendants and relatives of the inventor have been prominently connected with which of the following trucks.....

- a. Sterling. c. International.
- b. Marmon-Herrington. d. Walter.

When the charter for General Motors was first drawn up, the name wasn't General Motors at all, but.....

- a. Standard Motors.
- b. Federal Motors.
- c. United Motors.
- d. International Motors.

9.

The "White" truck derives its name

- a. From Thomas H. White.
- b. From the fact that the first trucks of this make were all painted that color.
- c. From a simplified spelling of Glenn L. Wight.

10.

Dodge, you know, takes its name from the two Dodge brothers, but one of these takes its name from five brothers......

- a. Mack.
- c. Walter.
- b. Stewart.
- d. Studebaker.



This semi-trailer owned by the Capitol N Transportation Company, Inc., Boston, Mass., displays a patriotic appeal to the general public to "Buy More U. S. War Bonds and Stamps Now" and to "Help Him to Help You."



and 5 yd. dump body is one of 400 converted 1½-ton Chevrolet chassis designed to corry a 2-yd. body. The 400 are working for the U. S. Navy, Advance Sea Base Division

CCJ NEWSCAST

(CONTINUED FROM PAGE 70)



Howard Jones, former White Truck Works Manager, has been elected vice presielected vice dent in cha production to vise White plant activitie promotion follows nearly 20 yr. of ser-vice in various ca-pacities in the preduction depart







The Perfect Circle Companies, annuonce the appointment of Martin Davis as assistant advertising manager replacing John Senn, who answered the call of the U.S. Army last fall.

Walter I. Buchan for the past seven years field represen-tative for the Mon-mouth Products Co., has been promoted to chief service manager and will be located at the company's main office in Cleveland,





Sydney P. Lyon has been elected vice president in charge of production Wilkening Manufacturing Co. He comes to Wilke from Kellett Auto Corp., Philadel Previously, he with Glenn L. McCo.



President of the Silent Hoist Winch & Crane Co., Brooklyn, N. Y., received the Army-Navy E Award for production excellence from Lt. Commander Ernest V. Abrams, U. S. N.



Plowing keels of the United States Navy, breasting the storms of the North Atlantic, driving through warm southern seas, racing to remote outposts in our global network of fighting fronts, are convoying materiel and foods to every theater of operation manned by our men.

To keep these foodstuffs rolling from farm and dockside to our fighting outposts-preserving it en route-delivering it table-fresh to field kitchens and mess halls is a tremendous, man-sized job. Special refrigerator trucks now are being employed by our Navy to transport perishable foods from ship holds to front line outposts with the minimum of delay.

Aiding in this job of supplying our fighting men with the essentials of a healthful diet, Federal was called upon to furnish special refrigerator trucks, as illustrated above, for use by the Navy. Here again is still another revealing example of Federal's ability to produce the kind of job-tailored fitness in heavy duty truck designs which are now contributing to the day-by-day task

of winning the war. Again we repeat: "Toss the Tough Jobs to Federal!"

FEDERAL MOTOR TRUCK CO. Detroit Michigan



Excellence in War Production"—building thousands of eavy duty trucks for America's

Sold on Every Continent Every Country-

or knowledge of the state of th

ROLLING WAR GOODS 23 HRS. A DAY

(CONTINUED FROM PAGE 48)

ments are taken care of in Cleveland. A night mechanic is on duty at the eastern terminal, where the tractors change trailers for the trip back to Cleveland or Detroit. This mechanic takes care of minor repairs and checks tires, brakes, water, oil and gasoline.

Trucks are lubricated every 1200

miles, or after each round trip, at the Cleveland terminal. Gasoline, water, tires, brakes, oil and battery are checked at the conclusion of each trip. The oil level is checked every 180 miles on the road. Each truck carries a one-gallon can of oil with a flexible nozzle for use if oil must be added. This oil is of the same brand and viscosity as that in the truck's crank-case.

The oil is changed every 2400 miles (two round trips) and always when the crankcase is hot. Oil filter car-

tridges are changed at the same time. This assures a clean crankcase, a clean engine, improved engine performance and reduced maintenance costs. An extra screen in the oil pan also helps assure better lubrication. Mileage per quart of oil varied from 71.6 miles to 222.6 miles for a typical summer month, with the average about 130 miles. SAE 40 is used in the summer and SAE 30 in the winter. Long valve and bearing life has resulted from a careful lubrication policy.

An analysis of oil taken from all the company equipment is made every 10,000 to 20,000 miles at an outside laboratory. This is checked for the amount of ash, water and condensation. An excess of any of these will bring a check-up with the fuel specifications.

At the end of each round trip the driver makes out a driver's inspection report on which he lists any equipment that is faulty, any repairs that are necessary and any service operations that are due. He slips this under the windshield wiper. When the mechanic comes to that particular truck, he looks at the driver's inspection report and makes any of the adjustments necessary. When these have been completed, he signs the report

Mimeographed preventive maintenance inspection sheets, or work orders, are used by the mechanics in checking their service operations. A work order is attached to a clip board and placed on each truck as it comes into the shop for service. The mechanic fills in the date, vehicle number and mileage at the top of each work order. There are 52 operations to check on the work order. The usual service operations, such as "tighten all rim bolts, check battery water, check all lights, grease chassis thoroughly, fill radiator," are performed in the normal between-trip period, with the oil and oil filter cartridges changed every other trip.

However, each tractor is off the road one day a week while it undergoes an engine tune-up and any similar repairs that may be necessary. Thus the engines are tuned approximately every 4000 miles. This tune-up includes cleaning and adjusting the spark plugs, honing and adjusting ignition points, adjusting tappets, cleaning the sediment bowl on the

(TURN TO PAGE 76, PLEASE)





Rings of Iron against Nazi and Jap!

Behind the man behind the gun engines must function faithfully. For these engines Sealed Power is making piston rings, pistons, cylinder sleeves-making them 24 hours a day-trying to make them worthy of the hard fighting soldiers, sailors and pilots in tanks, army trucks and jeeps, in pursuits, interceptors and bombers, in torpedo boats, destroyers and submarines.

For Fleet Engines, too!

Fleet cars, trucks and buses are

essential to Victory. Consequently while most of our production is for the Armed forces, it is part of our job to continue making piston rings for civilian use.

Sealed Power piston rings are available in packaged sets, individually engineered for your particular make and type of truck engine. These Sealed Power sets insure the long engine life and the fuel and oil economy the government expects today. Insist on them for all service work. They cost no more than ordinary rings.



AN INDIVIDUALLY ENGINEERED SET FOR SEALED POWER - CORPORATION EACH POPULAR MAKE OF CAR OR TRUCK

Piston Rings, Pistons, Cylinder Sleeves Piston Pins, Valves, Water Pumps, Bolts, Bushings, Tie Rods, Front End Parts

PISTON RINGS - PISTONS - CYLINDER SLEEVES

is half scrap. hop scrap

ROLLING WAR GOODS 23 HRS. A DAY

(CONTINUED FROM PAGE 74)

fuel pump, checking the generator for charging and condition of brushes, checking the starter, choke, water pump, gasoline lines and ignition system and checking each cylinder for compression. Both a timing light and a synchronizer are used in the tune-up. Three units per day undergo this tune-up at Cleveland. An oil company representative comes in every 30 to 60 days with a motor analyzer to supplement the weekly tune-up checks.

The mechanic checks each service operation or inspection on the work order as he completes it. When he has completed the job, he signs the work order and sends it to the office.

In the office the essential tune-up data are transferred to a large motor tune-up sheet, which lists the mileage and the dates when the tappets, points, plugs, fuel pump, water pump and generator brushes were serviced. Work orders are filed in a cardboard folder, one for each truck, while the motor tune-up sheet is kept as a permanent record.

Carburetion is checked weekly during the tune-ups. Gasoline consumption ranges from 111 to 150 gal. per trip on the Cleveland run east. If it goes higher than that, a check is made of the carburetor and the jet is changed.

Ignition is timed to the fuel specifications as recommended by the engine manufacturer. Due to the non-uniformity and lower octane rating of present gasoline, it has been found desirable to retard the spark. This lessens the pep of the engine but fuel consumption is improved. Gasoline consumption ranged from 3.9 to 5.4 m.p.g. for a typical summer month, averaging 4.5 m.p.g. for engines displacing 501 cu. in.

Trucks are fueled on the road at two points en route, the gasoline being billed to the company's account. After completing a round trip, the driver clips the gasoline tickets and receipts to his expense account and turns it in to the accounting department. A check of the gallonage consumed would reveal if any gasoline had been stolen from the tank. Locking gas tank caps helps insure against theft.

Wheel bearings are repacked every 15,000 miles in the tractors and every 25,000 miles in the trailers. The comparatively short period is accounted for by the fact that the bearings rarely have a chance to cool, being on the road 23 hr. a day and six days a week.

Main and rod bearings are checked at 50,000-mile intervals to note the effects of metal fatigue. They are replaced at a minimum of 70,000 miles, at which time about one quarter of the bearing is worn away by heavy use. However, main and rod bearings have gone up to 150,000 miles before replacement. Bearings in the transmission and differential are adjusted every 50,000 miles.

A wheel bearing record sheet is posted in the shop for the convenience of the mechanics, while a copy of the sheet also is kept in the office for permanent maintenance records. This sheet lists the vehicle mileage, bearings replaced, bearing number, cup number and next inspection.

(TURN TO PAGE 78, PLEASE)



★ SET BACK DELINER... Full vision clearance. Motionless, adjustable knockout punch. Builtin old rivet collector.
 ★ DEEP THROAT... For easy

ing-refacing department. Every known

labor saving feature is incorporated in

it's design. Write for catalog of the complete "Chicago" line.

working.

* ADJUSTABLE ANVIL Quickly set for any length rivet.

* LOW HEAD . . . Specially designed to facilitate work even on small diameter bands. * SHOE STRAIGHTENERS... Built in

* DRILLING UNIT ... Twospeed, V-beit drive, no hand pressurerequired, footoperated. ★ GRINDING UNIT... Fully machined, large table, 6¼° cushioned abrasive drum.
★ CAPACITY... Up to ¼°

★ CAPACITY . . . Up to ¼' diameter tubular or solid rivets. ★ POWERFUL... New toggle lever design. ★ QUIET . . . No noisy clatter.

Chicago Rivet 9610 W. JACKSON BLVD., BELLWOOD, ILL.

TESTED AND APPROVED FOR

U. S. ARMY AND NAVY USE

QUICK DELIVERY!



His sensitive radio direction finders are constantly listening to detect and locate "signals" from powerful ignition systems. To foil him, we make every piece of equipment "silent" from a radio standpoint. It must pass a rigid test before it is ready to turn over for Army inspector's okay.

Special-purpose trucks involve special problems, sometimes seemingly remote from motor truck manufacturing. Ward LaFrance has the experience and know-how to meet such needs. It has been gained over a period of many years of building specially engineered fire apparatus and other special trucks of many different types.

In postwar replacement, fleet owners should give thought to the advantages of vehicles designed and built for the exact job they have to do. Operators of mines, quarries and large construction companies will be interested in the increasing use of special trucks to eliminate heavy

capital investment in mechanical conveyor apparatus. Ward LaFrance engineers offer competent counsel to executives who are already looking forward to such postwar improvements.

WARD LAFRANCE TRUCK DIVISION





ELMIRA, NEW YORK

WARD LAFRANCE

C 1943 Great American Industries, Inc., Meriden, Conn.

MAY, 1943 Use postage-pai

Use postage-paid card inserted in this issue for free information on advertised products

ROLLING WAR GOODS 23 HRS. A DAY

(CONTINUED FROM PAGE 76)

Brake linings also are inspected when the wheels are pulled for bearing inspection at the 15,000-mile intervals. The condition of the lining, as to the percentage of wear, is noted in a column on the wheel bearing sheet. Brakes generally do not have to be relined until past the 100-000-mile mark, although on one tractor

they had to be relined at 60,000 miles due to poor operation by a driver who is no longer with the company.

Spark plugs are changed at around 37,000-mile intervals, while ignition points are replaced at approximately 54,000 miles. Valves generally are reground at 40,000-mile intervals, although some have gone 79,000 miles before a regrind. Close timing of the ignition and maintenance of proper engine temperatures are responsible for the longer valve life.

An effort is made to maintain en-

gine temperature at 170 deg. through use of properly adjusted thermostats, as this temperature is found to be the most efficient for operating conditions and to minimize sludge. No radiator covers are used due to the hills on the route but in extremely cold weather the driver is permitted to insert a piece of cardboard over one third of the radiator area. This keeps radiator temperature to a minimum of 140 deg.

New piston rings generally are installed at about 75,000 miles, although one engine reached the 125,955-mile mark before requiring new rings, Excessive oil consumption generally necessitates a ring change.

The tire and battery man keeps a close check on the voltage regulators and generators as well as checking batteries for water and voltage. Cables also are inspected for corrosion. Any weak battery is replaced by one that has been recharged. A notch on the bulb indicates when the 3/8 water level is reached in refilling the batteries. A slow charger is used on the batteries, with a 24-hr. minimum.

All major overhauls are performed in the company garage at Cleveland. Emergency repairs on the road are taken care of by service branches of the truck manufacturer, although on any emergency repair costing over \$10 the driver has to obtain approval by telephone from the company office at the eastern terminal or Cleveland.

The company shop rebuilds engines, transmissions and differentials, although pressed fits have to be taken to an outside shop, as the company does not have a hydraulic press. Steering box gears, rear axles and fuel pumps also are rebuilt by the shop mechanics. Distributors and carburetors are inspected and rebuilt outside due to the new material required. An electric welder is used for frame and heavy repair work, while an acetylene welder is utilized on fenders, bumpers, and smaller parts.

Experience with metal spraying of worn parts, which is done by an outside shop, has proved successful. Jack shafts and transmission parts have been metal sprayed. The splines on the jack shafts have given particularly good performance. As many parts are reclaimed for future use as is possible.

(TURN TO PAGE 80, PLEASE)



16 0.00 PERE MARQUETTE hundreds of little "General Purpose" Army Those whopping trailers you see above are

part of a large order built for the Army by Bay City Shovels, Inc. Because they are big, and built for high speed, you can bet they have good axles under them. And you're right! — they're Shulers!

It's a far cry from those big babies to the

trailers for which Shuler is also supplying axles. But both have important jobs to do, and both will roll 'em away with Shulers!

Or (as a friend wrote us the other day from a very distant U.S. base) - "it's hard to go anywhere in the world today without seeing Shulers"!

SHULER AXLE CO., Incorporated, LOUISVILLE, KY.

Export Division: 38 Pearl St., New York, N. Y.

West Coast Warehouse: Ford & Derby Streets, Oakland, Calif.

ROLLING WAR GOODS 23 HRS. A DAY

(CONTINUED FROM PAGE 78)

Safety meetings are held regularly in Cleveland for the drivers, with six to 15 men attending. These last one to two hours. Mutual problems are discussed and the company's safety program is emphasized. Even before the government 35-m.p.h. speed limit went into effect, the company put governors on its trucks set for 2400 r.p.m. or 38 m.p.h. Previous to that some trucks operated at excessive speeds. This not only created a serious accident hazard but proved hard on drive shafts, which had to be replaced frequently.

A comparison of the company's accident record for August, 1941, and August, 1942, shows the beneficial effect of the safety program and precautions. In the former month there were 26 over-the-road accidents throughout the company's operations, while in August, 1942, there were

only nine such accidents. In an eightmonth period in 1942, drivers on company-owned equipment had only three accidents. A monthly \$5 bonus goes to the driver having the most merits, while a demerit disqualifies any driver. The demerits are based on unfavorable reports from the checking company that keeps an eve on the company's trucks on the road.

The value of the company's preventive maintenance program is demonstrated by the fact that the maintenance cost averages less than one and one-half cents per mile, although the trucks average better than 90,000 miles apiece.

END (Please resume your reading on P. 49)

SALVAGE PROGRAM FILLS FLEET'S PART BINS

(CONTINUED FROM PAGE 39)

to put trucks into the hands of our drivers on Monday morning ready to roll. And during the week it is up to drivers to keep them rolling.

That doesn't mean that our salesmen or their helpers are expected to make roadside repairs; very definitely they are not. But it does mean that they are expected to report promptly any mechanical or tire trouble they may have. And, since it is to their interest as well as ours, they do it religiously.

While we keep four trucks available for road service, our trouble calls, including tire failures, are surprisingly few. To be considered in respect to this statement is the fact that the majority of our fleet-units are at least 17 years old. And we have some trucks in daily use which are of World War I vintage.

Governed speed and intelligent operation have reduced our accidentscore to less than one accident per year. When one occurs, more often than not it happens while our vehicle is parked, making a delivery.

Here, at Miami Coca Cola, our 2-man driver crews take over some of the detail which in the case of many fleets is handled by their maintenance personnel. Each driver attends to the gassing of his truck before he leaves the plant. He is responsible, too, for seeing that his truck's radiator is filled and that the oil in the crankcase is up to the proper level. Offhand. I can think of no instance when

(TURN TO PAGE 82, PLEASE)



-Speeding Transport and Production for Victory!

"Make use of what you already have." That's the order of the day.

Uncle Sam is in that kind of a fix, and it just so happens that this problem is right down the alley of the Servis Recorder.

> "A pound of Servis Recorder" can and often does save more than half a ton of motor truck, or factory machinery!

The trucks you already have-keeping them busy, making five trucks do the work of six, getting an extra trip a day, cutting down loading time, etc., etc.-Sounds practical; IS practical. It helps the war effort. At your service. THE SERVICE RECORDER Co., 1375 Euclid Ave., Cleveland, Ohio.

Tells Every Move Your Truck Makes

The Story of

the Day's Work



Spicer Transmissions and Universal Joints — A-1 in Halftrac artillery produced by these famous three

Immediately drafted for army service were reliable Spicer Transmissions and equally famous Spicer Propeller Shafts and Universal Joints, now making new heavy-duty performance records in versatile Halftracs produced by Autocar, Diamond T and White. Throughout the world they are speeding the advance of Allied Nation forces. Spicer peacetime quality in similar units permitted quick conversion to war needs, and will permit fast delivery for automotive production when victory is won. Spicer Manufacturing Corporation, Toledo, Ohio.



BROWN-LIPE CLUTCHES AND TRANSMISSIONS . SALISBURY FRONT AND REAR AXLES

SPICER UNIVERSAL JOINTS . PARISH FRAMES, STAMPINGS

SALVAGE PROGRAM FILLS FLEET'S PARTS BIN

(CONTINUED FROM PAGE 80)

a set of bearings have been burned out because of driver neglect.

It's the driver's job, too, to watch his tires for any indication of a slow leak and for cuts and bruises. It's also up to him and to his helper to keep their eyes on the road for signs of broken glass or any other object which can cause tire-injury.

Under present schedules we make no regular deliveries on Saturday. Therefore, we use that day for servicing our entire fleet. Every unit is washed, greased and has its tires inflated to manufacturer-recommended pressures. We also check transmission and rear-end lubrication. On alternate weeks we fill batteries with distilled water, clean and grease terminals and replace any of the latter which seem to need it.

For chassis greasing we use a portable electric lubricator which

operates on power furnished by a storage battery. Freshly charged, the battery will run the equipment for a time sufficient to lubricate the whole fleet. Put on the line and recharged, the battery then will be ready for use again.

For our week-end maintenance work we pull two men out of the plant. They are accustomed to servicing machinery, and know the importance of doing the job thoroughly. For this reason, and because they work as a team, going from one unit to the next, we keep no record of our weekly fleet maintenance routine.

In fact, the only shop bookkeeping we do is the keeping of a combination gasoline, oil, mileage and major repair record and one on tire pressures. For the former we have a school exercise book for each unit. On the cover, the book carries our fleet number, manufacturer's model, engine number and state registration number.

Inside, the record is ruled by hand into four one-inch columns on the left for entering the date, mileage, amount of gasoline pumped and the quantity of oil put into the crankcase. In the remaining space at the right of these columns, we note the details of any major repairs made. At the end of each month two parallel lines are drawn across the page, and monthly totals are brought down.

The tire-pressure record consists of a printed manila card, approximately 5½ x 9-in. These are furnished to us in quantity by a tire-accessory manufacturer. The card for each unit is clipped to the corresponding record book. Arranged in proper numerical order by fleet designations, the books are filed vertically in a case on the superintendent's desk.

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Naturally, a PM system should be tailored to fit individual fleet operating conditions. And, of course, one of the most important factors involved is mileage. In our case, routes vary from 150 to 1800 miles per month. The monthly fleet average is approximately 400 miles or about 5000 miles per year.

Because of our small mileage, slowspeed, low temperature operation, we do not make periodic oil changes. These take place only when units undergo a complete overhaul. Ex-

(TURN TO PAGE 84, PLEASE)



• The DuGas Dry Chemical Fire Extinguishing Unit consists of two tubes, each containing seven pounds of DuGas powder—each contained in a bracket suitable for mounting on trucks. Price of unit, \$6.50 f.o.b., Marinette, Wisconsin.

Dugas is a *dry powder chemical*, moisture resistant and free flowing. Extinguishes fire efficiently.

Dugas is barmless to motors, mechanical parts, materials, everything but flame. It is non-abrasive, non-corrosive, non-poisonous.

Always ready. Will not cake, harden, evaporate, spoil or deteriorate. Will not give off toxic gases. Will not conduct electricity.

dated December, 1942.

ly amended rule No. 3.3491 (A), Motor Carrier Safety Regulations,

Revised, of the I.C.C., and meets

the requirement of the Underwriters' Laboratories, Inc., war

emergency specification No. 299,

DUGAS ENGINEERING CORPORATION, Marinette, Wisconsin OWNED AND OPERATED BY ANSUL CHEMICAL COMPANY

NEW YORK CITY
Dugas Engineering Corp.
115 Broad Street
WASHINGTON, D. C.
Room 324
815 Fifteenth Street, N. W.
BOSTON, MASSACHUSETTS
General Equipment Corp.
261 Franklin Street
PAOLI, PENNSYLVANIA
Ansul Chemical Company
BUFFALO, NEW YORK
Bu-Ro Fire Equipment Co.
1382 Niagars Street
PITTSBURGH, PENN.
Williams & Co., Inc.
901 Pennsylvania Avenue
CLEVELAND, OHIO
Williams & Co., Inc.
3760 Perkins Avenue
CINCINNATI, OHIO
Williams & Co., Inc.
1921 Dunlap Street

COLUMBUS, OHIO
Williams & Co., Inc.
31 N. Grant Avenue
DETROIT, MICHIGAN
L. E. Averill Co.
W. 6527 Hamilton Avenue
CHICAGO, ILLINOIS
rp. DuGas Engineering Corp.
Rm. 1563, 20 N. Waeker Dr.
NIA MARINETTE, WISCONSIN
Ansul Chemical Company
RK DULUTH, MINNESOTA
Co. W. P. & R. S. Mars Co.
324 W. Michigan Street
KANSAS CITY, MISSOURI
Gustin-Bacon Mfg. Co.
1412 W. 12th Street
TULSA, OKLAHOMA
Gustin-Bacon Mfg. Co.
307 S. Cincinnati
FT. WORTH, TEXAS
Gustin-Bacon Mfg. Co.
710 T & P Bldg.

HOUSTO
Gustin-Ba MODEST
Ansul Cl
LOS AN.
Ansul Cl
LOS AN.
Assul Chemical Company
W. L. B.
380 Fleet
CANAL
Gandy & HONOLU
P. S. Pel
EX.
Aeroaffilis
115 Broa.
New Yor

HOUSTON, TEXAS
Gustin-Bacon Míg. Co.
448 M & M Bldg.
MODESTO, CALIFORNIA
Ansul Chemical Company
LOS ANGELES, CALIFORNIA
Ansul Chemical Company
451 E. Fourth Street
TORONTO, ONT., CANADA
W. L. Ballentine Co.
380 Fleet Street
ST. JOHN, NEW BRUNSWICK
CANADA
Gandy & Allison, Ltd.
HONOLULU, HAWAII
P. S. Pell & Co.
88 S. Queen Street

EXPORT AGENTS Aeroafiliates, Inc. 115 Broad Street New York, New York



and improvement, Steel-Vent has continued to set the pace. The Hastings organization, which fathered the steel oilring principle, is naturally contributing bored or badly tapered cylinders.

HASTINGS MANUFACTURING COMPANY, HASTINGS, MICHIGAN Hastings Mig. of Canada, Ltd., Toronto

PISTON RINGS . PISTON EXPANDERS . VALV-RINGS

HASTINGS

Tough on oil-pumping · Gentle on cylinder walls

SALVAGE PROGRAM FILLS FLEET'S PARTS BINS

(CONTINUED FROM PAGE 82)

amination of the oil at that time has shown no apparent break-down in its lubricating qualities, nor is it particularly dirty. Under these circumstances, to us it seems wasteful to discard oil on a purely arbitrary mileage basis.

We conduct what amounts to a

preparation for a obligatory semiannual police inspection. Rigidly conducted, this inspection makes necessary the pre-conditioning of brakes—equalization, as well as holding power—steering gear, lights, windshield wiper and other equipment required for safe operation.

In the interim between major reconditionings, weekly servicing, semi-annual safety check-ups and immediate attention to any reported 2500 mile check-up of our units in trouble, so far have kept our fleet operating at top efficiency. Incidentally, some units have been in operation for upwards of 300,000 miles.

As a part of our maintenance plan, we give each truck a complete overhauling every four years. That sounds like a long time but remember, please, that the fleet average for that period is 20,000 miles.

By "overhauling" we mean "rebuilding." We strip a truck down to the frame, and start from there. The engine comes out, and is completely disassembled. The crankcase is thoroughly washed out. Crankshaft and camshaft are micrometer-tested to determine wear. Bearings are taken up or replaced. Transmission, rear end, front end and all other working parts receive similar treatment. Along with our routine work, my assistant and I do one of these rebuilds in a month or less.

Our truck bodies, which, as previously mentioned, we build ourselves, are reconditioned each fall. This reconditioning includes both repainting and needed repairs. The color scheme used is red for running gear, black for fender and hood, and yellow for bodies and cab exteriors. Cab interiors are green.

For painting we have two large spray guns of standard manufacture eperating from an air compressor of 250 lb. capacity. With this equipment we also keep bright and freshlooking all of the wooden cases in which our product is handled. We do about 25,000 of these cases per year. Stacked up diagonally, corner to corner, in the yard, we can spraypaint 2000 of these cases in six to eight hours.

Closely tied in with our rebuilding set-up is a salvage system which makes the firm practically self-dependent, as far as replacement parts are concerned. For several years we have been buying, at a price and when opportunity offered, old trucks of the manufacture most largely represented in our fleet. These we have been disassembling and salvaging all usable parts.

We begin our salvage operation by stripping everything out of the frame. Next, we take apart all assemblies, such as motors, transmissions, rear ends and carburetors. Each part is scrubbed clean with mineral spirits,

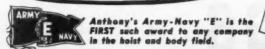
(TURN TO PAGE 87, PLEASE)



BODIES FOR THE -

I believe there has never been a contract handled as well in the history of industry, as you handled this.

I am personally very proud of their performance.





"NOW IN OUR 25th ANNIVERSARY YEAR"

READY FOR ACTION





2 American Brakeblok's free Brake Lining Advisory Service adapts one or more of these specialized types of heavy-duty brake lining to your exact needs, whether you operate manual, vacuum or air brakes. Keep your trucks running, use this free Advisory Service.



3 In addition to brake lining in all forms, American Brakeblok offers a comprehensive line of fan belts, straight and formed radiator hose, woven and molded clutch facings. Right now when all transport must keep ready for action, it pays to say "American Brakeblok!"



STOPPER THE PUP gets around in national magazines every month, and on signs and displays, selling safe brakes and American Brakeblok Brake Lining to motorists everywhere.

American Brakeblok Division, Detroit, Michigan



American Brakeblok products are quickly available through 37 NAPA warehouses and a nationwide group of .iobbers.

Brake Shoe

American Brakeblok BRAKE LINING



Casite cleans out sludge, retards the formation of engine varnish, frees gummy valves and rings. Casite is an oil carrier too! Thus, it helps reduce friction and wear by insuring lubrication in close

tolerance areas. To keep 'em rolling, keep 'em clean. Use Casite regularly in every one of your motors. You will find . . . as hundreds of other fleet owners have . . . that it pays.

THE CASITE CORPORATION, HASTINGS, MICHIGAN

CASTE CLEANS OUT MOTORS KEEPS MOTORS CLEAN



SALVAGE PROGRAM FILLS FLEET'S PARTS BINS

(CONTINUED FROM PAGE 84)

and given a critical inspection with the view of putting it to further use.

Out of much experience we have learned to salvage parts which at first glance might seem useless, but sooner or later they go into service.

We build up worn shafts—rear-axle shafts, for instance—with bronze or iron welding stock, and machine them down to size. When no element of strength is involved and only a correction for excessive wear is required, this has proven entirely satisfactory.

In the past, we have welded cracked and broken aluminum cases—crank and transmission cases. However, out of salvage we later acquired enough good replacement parts to make the repair of damaged cases unnecessary.

When new cylindrical bushings are needed, we regularly make them ourselves. For this purpose we used to be able to get piping of required material and in suitable sizes from junk yards. Since this source of supply has dried up, we find we can get from boat repair yards bronze and monel-metal shafts taken from small craft. Cut to length, and bored and machined to size, junked boat shafts have solved, for the present at least. our bushing material problem.

We make most of the gaskets we use. Since regular gasket material has become less plentiful, we have cut transmission and crankcase gaskets out of heavy, glazed poster stock, like the advertising matter company salesmen distribute to customers. Incidentally, we find we get better fitting bolt or stud holes by cutting them with a belt punch of the proper size instead of with a peening hammer.

Separated from the rest of the garage by a permanent partition, we have a 20 x 30 ft. parts room. From floor to ceiling, the walls of this room are lined with wood bins. In these, salvaged small parts are stored ready for immediate use.

On a mezzanine floor above this stock room is another, reached by a spiral staircase. On the floor and on shelves in the upper stock room we keep rebuilt extra assemblies—motors, transmissions, rear ends and steering gear units—and the larger

parts, such as axles and wheels.

Out of these two stock rooms we usually can supply ourselves with any needed replacement from nuts and bolts to carburetor parts. Even before the war effort and transportation difficulties slowed down the normal distribution of automotive repair parts, the company's purchases of these items averaged only \$200 to \$300 per year.

Since we started our salvage plan we have dissassembled between 15 and 20 used truck chasses. Naturally, from this volume of mechanical dissection we got some damaged and excessively worn parts. We also got a surplus of least needed parts, such as differential and transmission cases and frames. Large pieces are cut up with an acetylene torch, and all discarded material is sold as junk.

As near as we can figure, this chassis stripping and parts reconditioning program has reduced the firm's annual parts bill by no less than 80 per cent. The small number

(TURN TO PAGE 88, PLEASE)



SALVAGE PROGRAM FILLS FLEET'S PARTS BINS

(CONTINUED FROM PAGE 87)

of road failures we have, offers what should be convincing proof that the use of carefully reconditioned parts in no way interferes with our fleet's operating efficiency.

Tire Maintenance Program

Orginally tried out solely with the idea of cutting our tire costs, we began over a dozen years ago to use

recapped casings. At that time many local fleet owners seemed to feel that "running their money" out of new tires, and then junking them resulted in greater economy than did the recap plan. The chief criticism on the part of these owners against recapping was that frictional heat had a tendency to separate carcass from cap.

Applied to our problem, this objection had little weight because low speeds, and frequent stops produce a minimum of traction-induced high temperatures. On the other hand, in

our climate rubber will deteriorate while standing still. Therefore, it made more sense to us to renew the rubber while the carcass was still good than to operate on a tread which had lost much of its wear resistance.

Our experience with recaps has more than justified our decision to give them a fair trial. We have been getting from 10,000 to 15,000 miles out of new tires. Just before the breaker strip shows through, tires are removed and recapped, after which they will duplicate their original mileage.

We give carcasses a second and even a third recap, when their condition warrants it. Summed up, we get an average of 50,000 miles per tire. Naturally, in order to obtain that mileage from tires they have to have preventive maintenance.

As a part of our weekly PM routine, each tire is thoroughly inspected for any damage to tread or sidewalls. This inspection is in effect a check up on the daily care each driver is expected to give the tires on the truck in his charge. It should go without saying that any damage detected by a driver or any man in the shop is repaired at once.

We switch casings from wheel to wheel, matching them up as their condition at weekly inspections indicates as good judgment. Better tires are always mounted on rear wheels, because tractional strain is greater there. When new shoes were available we put them on the rear and mount used tires or recaps in front. We carry the same air pressures in recaps as we do in new tires.

Casing repairs which require only small inside patches, we make here in the shop. Any serious tire injury which requires a vulcanized inset, for example, we send to tire repairmen who are equipped to do that work. Reliners never have impressed us as an economy. The need for a reliner usually means that the casing has been weakened to the point where it isn't worth a sectional inset. Tube repairs and the setting in of new valve stems we do here in the shop.

Gas and Oil Economy

As has been stated, each driver attends to filling gasoline and oil into the truck assigned to him. We use SAE 30 motor oil of standard brand (TURN TO PAGE 90, PLEASE)



Saves vital time and manpower on inspections and all jobs requiring wheels to be pulled. One man can remove heavy dual or single wheels from the spindle, take them to the service department, and replace them. Dolly will pick wheels up from the floor and raise them to exact spindle height by means of the screw jack. See your jobber or write direct for complete information.

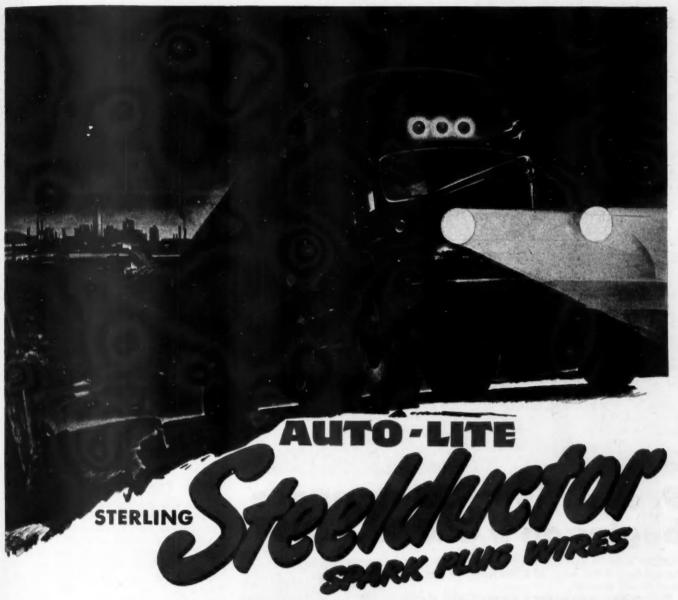


SHOCK-TYPE BEAD LOOSENER

Speeds removal of tires from trucks, buses and tractors by delivering a strong blow in exactly the right places to loosen the bead from the rim without pulling the wheel. Saves injury to tire or rim ...speeds work ...safer to use.

WEAVER MFG. COMPANY SPRINGFIELD, ILLINOIS





Helps Answer The Problems of Fleet Maintenance

Fleet maintenance today is a continuous round of rigid inspection, repair and replacement. Maintenance supervisors know that wasted gas, delayed schedules and time out for overhauling bite deeply into operating profits.

When the source of this trouble is inferior or worn cable, find out at once about Auto-Lite Steelductor...the superior Spark Plug Wire installed on the great majority of America's war planes.

Besides Steelductor, the Auto-Lite Sterling Line includes a variety of low tension wire and cable of which many grades are specified as standard equipment by leading car, truck and tractor manufacturers. It will pay you to get the complete Auto-Lite wire and cable story from your supplier.

THE ELECTRIC AUTO-LITE COMPANY

Merchandising Division

Toledo, Ohio

Sarnia, Ontario

FLEET OPERATORS and MAINTENANCE MEN

Write today on your letterhead asking for Form No. C-503, describing the advantages of Steelductor Ignition Cable.

AUTO-LITE WIRE and CABLE

IN ITS 26 GREAT MANUFACTURING DIVISIONS, AUTO-LITE IS PRODUCING A LONG LIST OF ITEMS FOR AMERICA'S ARMED FORCES ON LAND, SEA AND IN THE AIR

SALVAGE PROGRAM FILLS FLEET'S PARTS BINS

(CONTINUED FROM PAGE 88)

and issue it to drivers in one-quart cans. Empty containers must be turned in.

The gasoline pump is located between twin loading docks opposite the checker's office. Loading and readying a truck for its day's run are conducted as coordinated operations. When the checker at the yard gate checks out each driver's load, the driver turns in a slip for the amount of fuel he has pumped to his truck.

Daylight filling and the fact that few, if any, routes require a full tank prevents wastage at the pump. The location of the gasoline pump and the keeping of gasoline consumption records completely discourages the private use of company gasoline. Mileage and fuel consumption on individual routes is so uniform that any variation would be immediately noticeable.

We employ no additives in either oil or motor fuel, and we do not use a premium grade of gasoline. Since motors are completely disassembled and thoroughly cleaned after an average run of 20,000 miles, we never have seen any particular advantage in the use of oil filters. And here again we have to fall back for justification on our practically trouble-free record.

It is a company rule of long standing that drivers must shut off their motors when making their stops. There is a local police regulation to that effect, and while it may not be strictly enforced at all times, we still think it is a good one.

(Please resume your reading on P. 40)

NEW PRODUCTS

(CONTINUED FROM PAGE 43)

mirror can be locked in any position within a 90 deg. arc after the mirror has been inserted past obstructions. The mirror returns to a straight position automatically when the lock is released. One hand holds and operates the mirror, leaving the other for work. It is available in two sizes.

Use free postcard for more details

P111. Patriotic Decals

Here's a product many fleet operators have been inquiring about. Patriotic decals to decorate trucks and trailers to boost national morale and sales of war bonds, such as shown in the accompanying illustration, are being offered by the Meyercord Co., Chicago, Ill., decalcomania manufacturers



The decal illustrated is 17 in. high and 151/4 in. wide, brightly colored red, white and blue. Decals can be designed for whatever morale campaign fleet operators elect to sponsor. They are easily applied, simply by moistening in water and placing wherever desired.

END (Please resume your reading on P. 44)



* (Left) Globe Truck Hoist. Type 2-SHLR-210-AB, as furnished to Motor Transport Division, U.S. Army

(Below) Globe Wheel Dolly



reventive Mainte egins on a GLOB

FLEETS must be kept fit, whether they be the enormous fleets of the Army and Navy, or the bus and truck transit vehicles.

More miles...more service is expected today of both new and old equipment. More frequent preventive maintenance attention...more careful unit overhaul work is required to preserve critical wearing parts. Most preventive maintenance operations call for access to the underside of the vehicle, free wheeled.

Today, it is more important than ever to employ time-saving, labor-saving maintenance facilities. Globe Universal Bus and Truck Hoists...Portable Pit Hoists ... Wheel Dollies...have proved their importance in "Keeping 'Em Rolling."

GLOBE HOIST COMPANY

PHILADELPHIA, PA.

DES MOINES, IOWA



(Above) Globe 16,000 lb. capacity, Portable Pit Hoist

(Left) Globe Universal Bus Hoist





Use free postcard for more details



Oit FitTERS—Slow driving accelerates the formation of soot and carbon in engine oil. If not constantly filtered from the oil, this dirt will clog piston rings, which reased consumption of s. So, replace your oil ment whenever your C Oil Test Pad shows sPARK PLUGS—Dirty or worn plugs waste as much gos as one coupon in ten. Oxide coating collects on the plugs and causes them to misfire,—especially when the engine is working hard. Dirty plugs also cause hard starting which weakens your battery. Under present slow driving conditions, have your plugs cleaned and adjusted every few months.

AR CISANES — A dirty air cleaner increases gasoline consumption because it chokes down retor. Your air cleaner should be rinsed whenever your car is lubricated.



rouble free. But, if yours has been in use thirty or forty thousand



DRIVING INSTRUMENTS—Speedometer, gasoline gauge, oil pressure gauge, ammeter, and temperature gauge seldom need service. But, if they give trouble have them cared for at once.

BRING VICTORY QUICKER-BUY U. S. WAR SAVINGS STAMPS AND BONDS

Reproduction of national advertisement appearing in leading national and farm publications.

MAY, 1943

to

Conserve gasoline, oil, diesel fuel, and tires by keeping your AC Spark Plugs, Oil Filters, Air Cleaners, Fuel Pumps, and other products in peak condition. When replacement becomes necessary, select AC—and be sure of complete satisfaction. AC quality and precision production, accepted by the Army and in service on every front, assure maximum reliability and economy.

CHECKS AT DOOR SPEED FLEET'S PM

(CONTINUED FROM PAGE 41)

tising. In addition to the daily $1\frac{1}{2}$ minute laundry job, we go over each unit with polishing cloths at regular weekly intervals.

During the 12 years this PM plan has been employed, our truck routes averaged 40 miles per day. Since that time, the average life of our trucks has been 8 years and 7 months. Some of them are 11 years old, with more than 350,000 miles on them, and they are still going strong.

Oil Conservation Program

What are the leading factors that make for these records? There are several, but more than all else, our firm is convinced that most of the credit for it, is the never ceasing policy of checking oil at the door daily, plus the other easy to follow services on lubrication.

We use oil filters on each truck. These filters are standard size, factory equipment. By the color of the oil, we determine when cartridges should be changed and when a drain and refill is necessary. The instant that color shows up dark, we change the cartridge. If that doesn't do the work, we change oil. That failing, we never stop until the trouble is found, even if it requires a complete engine overhauling.

In servicing trucks all over the country, we found that best operations could be obtained by having each plant furnish mileage records on oil consumption by periods—spring, summer, fall and winter—then average them for the year. That was done due to the changing weather conditions and unevenness of climate which causes variations of driving conditions, hence, determines length of time a crankcase filling, with filter equipment, would work safely. Our records kept track of oil changes and additions.

We began that in 1933. In that year our trucks averaged 700 miles per gallon of oil per unit. By changing filter bullets when oil shows up dark and by draining such oil at once, we gradually increased the mileage until by 1941 the consumption rate jumped to 900 m.p.g.

Other major factors contributing to this improvement were:

1. A maximum of 3000 miles between cartridge changes and a minimum of 1500 miles, according to truck operating conditions.

2. Adoption for all-year use of SAE 20 oil, made possible by our heated garages which eliminates hard starting on cold days.

Careful inspections and servicing were largely responsible for the average long life of our vehicles; up to 11 years and 350,000 miles on some of our units. Besides, the reduced oil consumption of 22 2/3 per cent was a gratifying gain over the former amount, under guesswork and haphazard methods.

Other Daily Inspections

Getting back to the daily inspections at the door, while they are being made, a mechanic can make casual inspections to locate body scratches, fender dents, etc. If anything shows up that needs immediate service, the unit is taken out for that specific job to be done.

Once each month the mechanic (Turn to Page 95, Please)



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If you can keep your Tools while those about you Are losing theirs—and calling it "bad luck"…—
Or breaking Tools through carelessness or temper
And end up cursing fate because they're stuck…—
If you can do your job and do it better,
Keeping wartime transportation on the road…—
Conserving Tools so fighters may have plenty
You're a MAN—who lives the true mechanic's code!

with apologies to Rudyard Kipling

Sound military tactics take into account all the "ifs" in a given situation... controlling unknown factors in advance, and planning for unforeseen conditions. As New Britain developed its famous Line of Hand Tools, all the "know how" in many years of tool steel practice and high precision standards were focused on these Tools of "Greater Strength—Better Fit".

There's a big dividend for you in this planning—a plus that meets even the once unforeseen conditions the War has placed on today's Hand Tools. Now, when replacements are difficult to make, and present Tools must stand up and do more than ever, the values in New Britain Tool stamina and dependabilility are obvious to every user. The "ifs" involved in Tool life and performance were studied and controlled by New Britain years ago.

You can take some of the "ifs" out of your own vital wartime job you are now handling so well. Make YOUR Tools last for the duration. If you will care for your Tools—don't misuse or lose them, they'll go the distance. And, you MUST do it, for the repair and maintenance of America's critical transportation looks to you—Keep It Rolling! The New Britain Machine Co., New Britain, Conn.



The complete New Britain
Line for Automotive, AirLine for AirLine fo

Many Britain



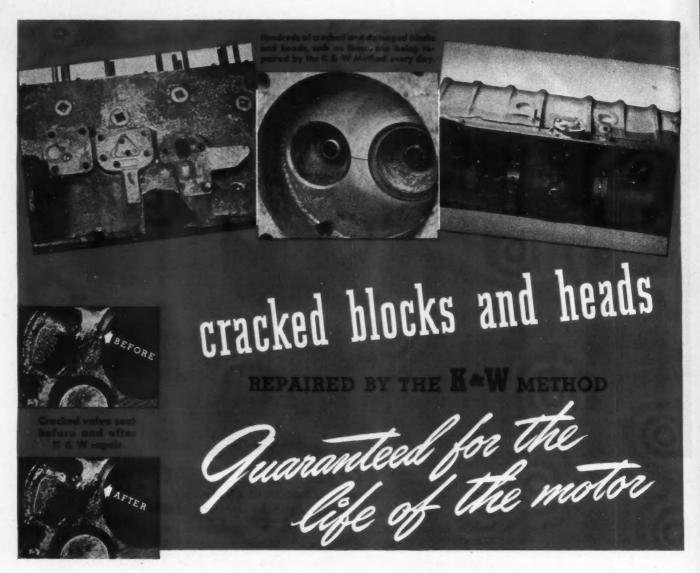
THE ARMY-NAVY "E" PEN-NANT flies over the New Britain plant today, signalizing outstanding performance in the production of machine tools, aircraft engine parts and projectiles.

GREATER STRENGTH . BETTER FIT

MAY, 1943

Use postage-paid card inserted in this issue for free information on advertised products

93



* Here is a safe, sure, guaranteed method for repairing all cracked blocks and heads that works every time, regardless of the size or location of the crack. All K & W repairs are fully guaranteed.

Experience with this method proves that an application of K & W Metallic Seal through the radiator will seal the cracks and give perfect service in about 90% of the jobs.

The few jobs that cannot be repaired by sealing, such as blocks through which a rod has been thrown, or in which the cracks are obviously too large and numerous, are permanently repaired by the K & W Mechanical Method.

The K&W Method is used by bus, truck and tractor operators all over the country and is recommended by many motor manufacturers.

It is available in most localities through K & W Licensed Repair Stations. When service is not available locally, it can be handled by Factory Service Department, Bloomington, Indiana.

Get the facts about this revolutionary method today. Ask your jobber, or write us for complete details.

> NOTE: Operators who maintain their own shops can obtain a license, under K & W patents, to handle their own repairs. Mechanics of licensees are trained by K & W representatives, without cost.

THE K&W METHOD

che

ha

How to use it!

- 1. Unless the block is obviously badly cracked, K & W Metallic Seal applied through the radiator will give perfect service in nearly 90% of the jobs.
- 2. If block is badly cracked, use the K&W Mechanical Method.
- 3. Always finish a Mechanical Method repair job with K & W Metallic Seal through the radiator. Use boiling water.





KERKLING & COMPANY, INC. • BLOOMINGTON, INDIANA

CHECKS AT DOOR SPEED FLEET'S PM

(CONTINUED FROM PAGE 92)

checks wheel alignment on all trucks. This is done at the door, or between there and the wash stand, by running the wheels over a "wedgie" board.

All this sounds like a lot of work handled at the door, but we find it actually is the fastest way to speed up and improve inspections, and save man-hours.

Gasoline Economy

We always have watched gasoline mileage closely. Our 1933 consumption per vehicle averaged 11.3 m.p.g. That was our best record up to that time. Not only have we been able to maintain that record, but in 1941 we reached 11.6 m.p.g. This is not a sensational increase, to be sure, but it amounts to an appreciable saving for as fleet as large as ours.

The possibility of improving upon the 1941 economy record is a scant one, owing to the lower octane ratings of present-day motor fuels. It is encouraging just to be able to maintain the present mileage. We get a little "ping," but for the present, we expect to leave well enough alone.

State Inspection Costs Reduced

We have four separate fleets in the Chicago area, comprising 250 trucks. Illinois motor vehicle regulations require safety lane inspections on brakes, headlights and wheel alignment twice a year. At first, these inspections were made by state and city officers. A lot of time was wasted under that system. Each truck and driver had to go into the safety lane while another man stood in line anywhere from 15 minutes to four hours to await his turn, depending upon traffic conditions at the lane. The cost was prohibitive. We had to find some way to overcome this excessive expense.

In 1940, we applied for our own licensed inspector, which we obtained by posting a bond. We furnish our own brake testing, headlight testing and wheel alignment equipment on the job, which is required by the traffic regulations of state and city. City inspections are required on passenger cars only, and they are conducted within the city limits.

Our inspector is a full time com-

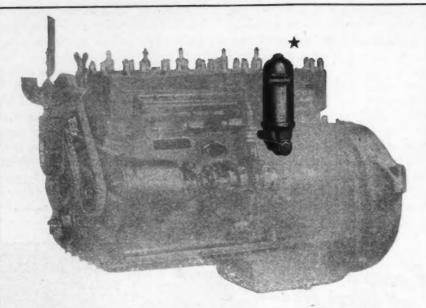
pany employee and is connected with our fleet maintenance department. Now we inspect our own trucks, and, thereby have eliminated a great time loss

Our inspector is much stricter than the state officers. This is to our advantage. For example, a state officer may report the headlights are not clean, or are out of proper focal adjustment. He orders them cleaned up and adjusted, but he allots a specific time for doing it. Our inspector orders them cleaned up and adjusted immediately. Besides, he gives the driver a rejection ticket for his negligence which counts against his record. Our more rigid inspection plan has improved the safety factor of driving.

Since we started that method of inspection rejections have decreased to a negligible degree. Even in these rare cases of mal-adjustments they cover minor things only, perhaps dirty headlights, mirrors out of proper range, but practically no instance

(TURN TO PAGE 96, PLEASE)





*Engines Equipped With MICHIANA FILTERS NOW Paying Big DIVIDENDS

With repair crews cut down, and with still more service required of every motor-driven vehicle—the thorough oil cleaning ability of MICHIANA Filters is paying big dividends in longer hours of satisfactory operation and fewer hours in the shop.

MICHIANA Filters are made in a range of capacities for both gasoline and diesel engines,—from the very smallest to several thousand horsepower. Engineered to provide thorough adequate cleaning of the oil stream,—they are in wide use for engine protection where protection is so vital,—on U. S. Naval and Maritime vessels.



Typical MICHIANA
Filter. Base castings differ for different installations
Either type filter
element, Replaceable Cartridge or
Re-Packable, may
be furnished.

The cleaning is accomplished without causing any other change—important in cases where additives are used in the oil. The unusual filtering capacity of MICHIANA Filters is a result of long fibre of selected cotton provid-

ing greater absorbing area for maximum cleaning in minimum space. . . .

MICHIANA PRODUCTS CORPORATION
Michigan City, Indiana



MICHIANA
DUO FLO
OIL FILTERS

CHECKS AT DOOR SPEED FLEET'S PM

(CONTINUED FROM PAGE 95)

of improper steering or brake adjustments.

Tire PM Since 1930

When the ODT order to reduce mileage to conserve rubber was issued, tire conservation was not new to us, as we started that in 1930. From our tire records we are able to show steady improvements in tire service for 12 consecutive years. The improvements were not spectacular—just a gradual mileage increase and lower total tire costs per mile.

Under the present rubber shortage, the biggest gains we can make now are in the increased percentage of casings that we can preserve for safe

recaps.

To illustrate, in 1939 our new tire replacements amounted to 2580 units. That also was our first big year in recapping, namely, 639 carcasses. In other words, our recaps amounted to about 25 per cent of total new tires purchased. As the carcass represents about two-thirds the cost of a new tire, its conservation value now has materially increased, in the following way.

1. Saves money for the company. For example, the management maintains that when a new tire becomes tread-worn and is ready for a recap, that tire has given all the service we could expect from it, and it owes us nothing. What the recap affords, is a net gain. We figure that the recap is an investment only after the original tread has run its mileage.

Our tire PM records show that the recaps averaged 20,498 miles per unit, and cost us only 43 cents per 1000 miles in 1940. Thus, from recaps alone, we used some 13,000,000 miles on tire casings that would otherwise have been thrown away.

2. Conserves national rubber supply, as the carcass construction cannot employ reclaimed material on

grade A tires.

3. Conserves labor in the tire industry and reduces transportation carrying raw materials and finished products back and forth between manufacturer and consumer.

At this writing, our 1942 records are not yet available, but in 1941 and

(TURN TO PAGE 98, PLEASE)

MOONEY BROTHERS

relies on

Brake Linings



WM. O. MODNEY FAUL D. MODNEY



MOONEY BROTHERS

MOTOR - TRUCK TRANSPORTATION

HEW CASTLE, PA.

Thermoid Company, Trenton, N. J.

Gentlemen:

We own and operate 46 units of various types to handle different transportation requirements in western Pennsylvania, eastern Ohio, and northern West Virginia.

Most of our work is for war plants, and rush shipments over hilly routes make up a large part of our million-mile-a-year service.
This is tough on trucks and brakes.

We find that Thermoid Brake Linings give us we find that Thermold Brake Linings give us many miles of satisfactory brake action, and help us keep our units in tip-top shape for our war work with a minimum of expense and lost time.

Yours very truly, MOONEY BROTHERS

COURS A MODNEY

W. O. Mooney

WOM: HMK . DEPENDABLE SERVICE . Whether you are doing war work or not, you will welcome the extra margin of safety and service in Thermoid Brake Linings.

Try Thermoid on your toughest units -you'll soon have them on the rest. They are "Right the first time."

Custom-Built Brake Lining Sets . CBB Sets Thermo-blocks for heaviest duty

CHECKS AT DOOR SPEED FLEET'S PM

(CONTINUED FROM PAGE 96)

1942, we recapped every tire that was fit. Our PM methods have increased the percentage of suitable carcasses perceptibly. The mileage records have been increasingly gratifying, ranging at 75 per cent average of new tread mileage.

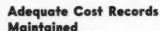
The increase in number of casings suitable for recapping is due to the more rigid inspections, our policy of removing foreign objects from the tread, fixing cuts and other injuries immediately, and being a little more liberal in the selection of casings for recaps. For example, we used to throw away any carcass that had a break, or one that was over two years old. Now we have them repaired before recapping, even if they are older than our former age limit, providing the casing is otherwise sound. We also have the same policy respecting sectioninizing newer tires, when injured accidentally.

In addition to our daily air pressure tests on the checking-at-the-door plan, our salesmen turn in reports twice each week on steering condition, brake action and whether or not any tire on the unit was injured on the trip, or if undue loss of pressure prevails. The time for brake adjustments, steering, aligning, balancing and removing foreign particles from treads, is determined partly on these reports, and our regular inspection schedules.

We use recaps on all wheels. We do not overload. Our products are more bulky than heavy. Tires are rotated only for repairs, or upon mounting new ones or recaps. Skid chains for rear wheels are carried in all trucks in winter.

At present, the most we can hope to achieve with economy and safety is two recaps on one tire, although the third is an objective worth striving for. But right now, two recaps on one casing are few. On longer routes, of which we have only a few, the third recap is a better possibility, in as much as the carcass age is younger, therefore, more suitable for more recaps.

Our records show that age is a factor, and the carcass deteriorates faster after two years old. Keeping all moisture out of the cords for two years of continuous use is a difficult achievement, and carcass strength also declines under the constant flexing and sledge-hammer blows in service. But we are constantly gaining a closer approach to the objectives by checking costs, by keeping accurate mileage records, and maintaining our PM service rigidly.



Operating costs are broken down by plants in dollars and cents, and include labor charges, supplies, repairs, tires, sundries. Then all items are totaled as to cost per route and classified in the regional territory where it operates. But that is not all. This is broken down into cost per mile also.

We group the records of all the plants, but at the end of each year we make a recapitulation of the entire operation of each truck for the year. Then we have the total cost of everything. For example, each tire has its own individual card on which

(TURN TO PAGE 100, PLEASE)



TUBE FITTINGS * FLEXIBLE TUBING * TUBING SERVICE TOOLS

Order from your JOBBER

No. 49-PL

PSARAN

BATTERY TESTERS

Lautomotive Products

* FREEZETESTERS * WELDING OUTFITS

Dayton is in the Battle of Transportation

From dawn to dusk and dusk to dawn America's fleets roll in the battle of transportation, hauling vital man power, weapons and essential war materials.



To "keep 'em rolling" at peak efficiency, Dayton has built extra "Thorobred" strength and durability into its Truck and Bus Tires enabling them to win performance medals in the great battle of Transportation.

And, Dayton Thorobred Tires are under enemy fire on anti-aircraft guns, cannons, trucks and trailers for the United States and her Allies. All that Dayton has learned in 37 years of growth and progress as an outstanding pioneer of many tire "firsts" is primarily at the disposal of the Armed Forces.

Out of the war will come the tire of tomorrow. Whether it is made of natural rubber, synthetics, rayon cord, cotton cord or any combination of these and other materials, you can count on Dayton retaining its position as The Quality Leader. Dayton's time-tried experience and continuing "know-how" in the pioneering and developing of synthetic and natural rubber compounds and processing methods, will be your guarantee of post-war quality and dependability.

Dayton Thorobred Tires are available to qualified fleets under the rationing program.

THE DAYTON RUBBER MANUFACTURING COMPANY
DAYTON, OHIO



BY DAYTON...PIONEER IN SYNTHETICS...LEADER IN RUBBER

IN 1934—climaxing 20 years of notable tire "firsts," Dayton built America's first successful synthetic rubber tire. Since then our research, use and development of synthetic application to automotive and industrial rubber products has been continuous and successful.

CHECKS AT DOOR SPEED FLEET'S PM

(CONTINUED FROM PAGE 98)

to record its complete case history, showing the number of miles run, the cost in dollars and cents, cost per mile and what was done with it until finally discarded.

Similar records are kept on recapped tires. Entries include the number of times recapped, final disposition and total cost of mileage. Time on and off, as spares, also is recorded to complete the record.

We also break down all brands into a separate record as to sizes, such as 32 x 6, 6:00 x 20, 7:00 x 17, and 5:25 x 18.

When in the opinion of the shop superintendent a tire has completed its usefulness, he mails it to the headquarters of his regional office. The records are then completed from the accumulation of information.

However, before the latest ban on disposing of used tires, if the local superintendent could sell the tire or trade it in on a new one to better advantage, he was permitted to do so. Otherwise, it remained in salvage stock until the vehicular supervisor could call and inspect them. Then a written notice authorized final disposal of such worn tires accumulated in the shop.

For permanent record information, work sheets are used in each maintenance shop and each tire is entered by name of tire, size, etc. At the end of the year these sheets are totaled. Then the company knows exactly how many new tires, how many recaps have been used, how many major repairs made, the mileage run, the cost per tire, and total dollar and cents cost, and per mile cost of each tire for all fleets in the 96 regional maintenance shops.

END

(Please resume your reading on P. 42)

"CHI" FLEETS SHY AWAY FROM WOMEN

(CONTINUED FROM PAGE 37)

them in loading their vehicles and in some of the maintenance requirements of their trucks. He also expressed the belief that there wasn't any urgent need yet in Chicago for women drivers in this industry. That is, assuming that management would be willing to put back to work some of the "over 45" drivers formerly employed and anxious to get jobs; and also assuming their willingness to pay a little overtime to some of the drivers now employed. It was his opinion that some fleet managers are entirely too keen, during these war emergency times, in wanting only the very young type of delivery drivers "who will jump in and out of his delivery wagon; and always run, instead of walk, up and down stairs."

The writer was able to get in touch with two Chicago companies in this industry employing women drivers. The Superb Dyeing and Cleaning Works has had some women drivers for about four months. During this period there has been a considerable turn-over, but one company official expressed general satisfaction with their services.

"Women drivers," said he, "are just like men drivers—some good and some bad." The materials which his women drivers must handle and deliver were reported as usually light

(TURN TO PAGE 102, PLEASE)



ENGINEERING

SPECIFY

Blood Brothers

EXCELLENCE

WHAT you say - when you say

Porus * Krome

You say-

- "Less wear on cylinders."
- "Less wear on piston rings."
- "Level oil consumption."

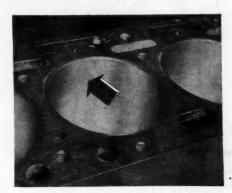
What you've said is-

"Longer engine life and more efficient performance."

That's what you get with PORUS-KROME.

PORUS-KROME is a precision process of applying hard chromium, of controlled porosity and smoothness, to cylinder bores of internal combustion engines.

Europe knows it well, uses it widely. That is where this process originated . . . in Holland. England and Canada know and use it, too. And America is learning fast. PORUS-KROME is a going operation here, now, for military purposes.



PORUS-KROME is the precision application of hard chromium, having controlled porosity and smoothness, to internal combustion engine cylinder bores, and other bearing surfaces. The improved lubrication plus low friction adds greatly to both life and efficiency by decreasing wear and corrosion.



PORUS & KROME

Multiplies Engine Life

VAN DER HORST CORPORATION OF AMERICA SLEVELAND, O. Y.

"CHI" FLEETS SHY AWAY FROM WOMEN

(CONTINUED FROM PAGE 100)

weight, excepting for an occasional rug. The company method is to give an applicant a driving tryout test and then special training.

Unique Cleaners and Dyers, Inc., also is giving attention to women drivers. Vice-president M. P. Freeman reported that they then had only one woman driver, but that they like her very well and plan to hire addi-

tional women as needed when they lose men drivers. They had previously decided, as an employment policy, to hire only women drivers sturdy enough to handle all phases of delivery operations.

Their one woman driver is Josephine Ladny, five-feet-seven in height and weighing about 140 lb. She applied in response to a classified ad stating they wanted a "strong energetic girl to drive a light weight delivery truck." She was hired early in December, after proving ability as

a driver in traffic. For two weeks she rode as an assistant to another driver, including increasing periods at the steering wheel.

Because she was their first woman driver, they added some comforts to her car, including a heater. They also were willing to help her in loading, etc., but she wouldn't accept such help, wanting to prove that she could start entirely on her own. So she began by entirely loading her own truck, gassing it and parking it exactly like the men drivers. She is familiar enough with the operating mechanism to know if anything goes wrong, and declares she could change a tire if necessary.

In more than two months, she had had no trouble in traffic, no accidents, and no trouble in keeping on normal delivery schedule. During the recent sub-zero weather with much snow and ice, she was favored somewhat by keeping chains on her tires most of the time, but she never has stalled her car.

In addition, she is already one of their best route salesmen, usually adding \$3 to \$10 in extra sales commissions to her regular \$30 weekly salary. During a recent week she was second from highest in commissions among about 15 competing salesmen-drivers.

Her costume is the same standard uniform worn by the men drivers. It is reported very becoming to her—also apparently quite comfortable, after she had learned that the pockets in men's clothes made it unnecessary for her to continue to carry her purse in her hand. She is also reported as not afraid to get her hands dirty; but, as a persisting feminine touch, she always keeps a jar of hand lotion handy in the cab of her truck.

Somewhat similar experiences relative to the need of drivers were reported to the writer by Chicago spokesmen for the laundry industry. In a few instances, Chicago laundry fleet operators have employed an occasional woman driver. But in general the problem of driver shortages in the laundry industry have been met in part through the payment of overtime to some of the remaining drivers; but most largely the need for drivers has been lessened through the re-zoning of routes and through fewer scheduled deliveries during the week.

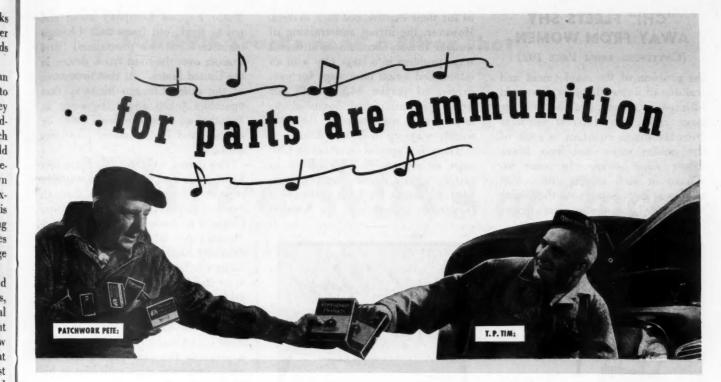
These spokesmen pointed out that (TURN TO PAGE 104, PLEASE)



Edwards is devoting its entire manufacturing facilities to the production of military trailers and many other articles required for Victory. And, as individual employees, we have pledged ourselves to buy War Bonds and assist the national salvage and conservation programs to the best of our ability.

EDWARDS TRAILERS

EDWARDS IRON WORKS, INC., SOUTH BEND, INDIANA



7ES, Thompson Engine and Chassis Parts for replacement service are essential to the war effort. Defense workers must get to their jobs, farm tractors must cultivate the fields, trucks must rush deliveries of vital materials.

Under war impetus, Thompson Products has become one of the world's largest suppliers of vital precision parts for aircraft, tanks, jeeps-for war engines of every description.

In This Emergency Make

More Use of Your T. P. Jobber's

Machine Shop Facilities

That's our big job—the number one job. But we also continue to make replacement parts for existing automotive equipment. America's automotive transportation system must not be paralyzed by wear-out and break-down.

We can report to the repair and maintenance trades that thus far we are keeping

> a considerable volume of the parts you need going to T. P. jobbers.

And they are good parts,parts that we are proud to stamp with the T. P. trade mark. These parts are the ammunition passed to you to use against the Axis. Use it wisely-where it is most needed-where it will do the most good!

THOMPSON PRODUCTS. INC.

· CLEVELAND DETROIT LOS ANGELES



mpson Products

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"CHI" FLEETS SHY AWAY FROM WOMEN

(CONTINUED FROM PAGE 102)

the problem of the employment and training of women laundry drivers in Chicago, as an example also of other large cities, has different elements from the driver situation in some of the smaller cities that have lower driver wage scales. In some instances in such smaller cities, fleet managers have announced the "same wage scale" for new women drivers

as for their experienced men drivers. However, the hiring and training of women drivers becomes a different wage problem in a large city with an established union base wage for men drivers of maybe \$45 to \$48 per week, with additional bonus allowances which may increase the total weekly wage up to \$75 or \$85.

There is a special situation in Chicago as regards to possibilities in getting women drivers for big overthe-road motor trucking outfits. In November of last year the Keeshin

Motor Express Company hired and put to work, out from their Chicago main terminal, the proclaimed "first woman over-the-road truck driver in the United States." At that time some of the other Chicago highway fleet operators joked about the event as "another of Jack Keeshin's publicity stunts," and it did indeed have that angle.

The driver was Mrs. Virginia Mc-Lean, described, by a girl newspaper reporter who rode with her through her first night run of 300 miles from Chicago to Cedar Rapids, Iowa, as "buxom and 28," with a 7-year-old daughter left at home with her mother-in-law and a husband soon to be inducted into the Navy. It was told also that for several years Virginia had been assisting her husband in running his tire repair shop in southwest Chicago; and that during a previous two-year period she had made numerous trips with him in his livestock transportation truck, which had included much relief driving.

The girl reporter also described Virginia's first trial handling of a big Keeshin truck—"wheeling it around the big Chicago terminal yards like a baby carriage." During the initiation night run to Cedar Rapids, the only minor troubles reported in her handling of the tractor-semitrailer outfit with 31,000 lb. of war-vital freight was when she stalled the engine once on a steep highway hill, and when the windshield wiper stopped along a fog-dimmed pavement on which were rambling pigs and cattle.

During her first two months as a Keeshin driver, Virginia McLean is reported as "never missing a trip, and never having an accident or serious schedule delay."

Doubtless stimulated by their find of this highly competent woman driver, Local 710 of the Highway Drivers and Helpers Union announced a training course for women as over-the-road drivers, with training up to two or three weeks if need-However, after a short trial period, union officials commented that there was "no present demand among Chicago fleet operators for women highway drivers." When asked specifically about how Virginia McLean was getting along, one union official significantly replied, "We could get jobs for any number of drivers like her."

(TURN TO PAGE 106, PLEASE)



TODAY'S Trucks need a Filter that

Keeps Oil Clean Three Ways at Once!

CHEMICALLY . PHYSICALLY . VISIBLY

THIS IS NO TIME to take chances—when one little worn-out part can put your biggest truck off the road! Your motors need the best protection you can give them. So if your fleet isn't already filter equipped, install Frams now. And if your fleet has filters, check up! Are they really adequate for today's conditions? Your jobber can supply big, heavy-duty Frams made to order for the engines you've got and the job they're doing.

If your fleet has filters of adequate capacity, step up their performance with genuine Fram chemically-treated Replacement Cartridges. Remember, Fram Cartridges do what no non-chemical filtering element can: they not only filter out dust, dirt, sludge, and abrasives, but also impede formation of acids and other harmful corrosives that eat away motor parts. They keep oil chemically, physically, and visibly clean. They protect motors—save parts—and cut maintenance costs. Fram Corporation, Providence, R. I. Canadian Distributor: J. C. Adams Co., Ltd., Toronto, Ontario, Canada.



"CHI" FLEETS SHY AWAY FROM WOMEN

(CONTINUED FROM PAGE 104)

This sentiment also is seconded by officials of the Keeshin personnel department. They say they could use several more women drivers of the Virginia McLean type.

"The seeming best sources for competent women highway drivers," said one Keeshin official, "is from women with the kind of training that Mrs. McLean has had. That is, women who have been helping their husbands in operating one-man trucking outfits. Since there are thousands of one-man trucking outfits in the United States, it would seem that there ought to be a considerable number of already trained prospective women highway drivers. We also believe that still other carefully selected women, without specific highway driving experience, could be trained for such driving."

At present, in Chicago, it seems that the increasing numbers of highway truck drivers needed to replace drivers who are being drawn into the armed forces or going into the war industries, are coming from the use of more drivers in the over-45 age group, and through the hiring and training of other types of drivers. These include many taxicab drivers now without jobs, and many surplus drivers from the numerous local delivery fleets which are reducing their mileage, and from fleets serving nonessential industries.

Women Mechanics

Undoubtedly the most critical labor shortage in the trucking industry in the Chicago area is the immediate need for some hundreds of additional shop mechanics—although a few operators say they recently have been having increasing applications. But in the total, many trucking outfits are reported temporarily laid up because of the need of minor maintenance and other more critical repairs.

Evidence of this comes both from operators and from the Auto Mechanics Union, Local No. 701. Don Burrows, business manager of this union, has been making efforts to remedy the situation by finding and training additional auto mechanics. He states that practically all union members are working 60 to 70 hr. or more a week, trying to keep the trucks rolling.

Toward the relief of the critical situation, early in December of last year this union made a public appeal through the local newspaper for applications from women workers. It was stated that, due to the shortage of skilled truck mechanics, the union would welcome applications from women who either had mechanical skill or an inclination to learn. A few days after the release of this featured newspaper story, Burrows stated, "Only one Chicago woman ever bothered to call us up. We asked her to come down and talk to us, but we didn't hear from her again."

"It seems," he later commented to the writer, "that women just don't have any flair for work around grease. They apparently don't like to get oil in their hair, or do work that might bruise their hands or break their finger nails."

Questioned more fully, Burrows thought that the apparent aversion of women to work as auto mechanics had been influenced somewhat by the

(TURN TO PAGE 108, PLEASE)



THIS WARNING SPOTS "TOMORROW'S FLAT"

Here is the evidence that not only tells that you are going to have a flat... but points out which tire it will be. Thousands of tests prove that punctured tires may run for weeks, meanwhile steadily losing pressure and wasting precious mileage. To spot "tomorrow's flat", check tires before inflation. Then compare the pressure readings. Slight, uniform loss between periods of inflation is normal. But watch for the tire that loses more air than the others. The abnormal pressure loss is your warning to have the tire repaired and avoid a flat.

WRITE FOR RECORD CARDS



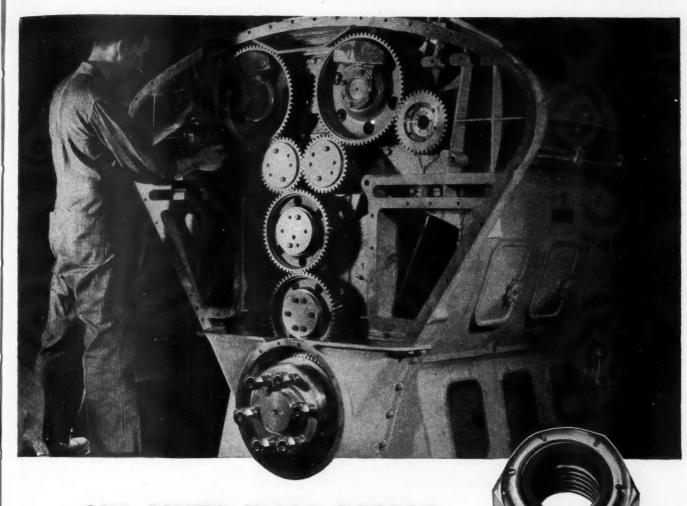
Fleets using this plan report big decrease in number of flat tires. Put the plan to work in your shop. Get complete instructions and a supply of commercial tire Pressure Record Cards, no charge, by writing to Schrader, P. O. Box 240, Brooklyn, N. Y.

COMPAIR LOSS



THE Schrader SYSTEM OF FLAT PREVENTION

A. SCHRADER'S SON, Division of Scovill Manufacturing Company, Incorporated, BROOKLYN, N.Y.



SIX NUTS THAT BRIDLE
A THOUSAND HORSEPOWER

This is the business end of a powerful Diesel engine.

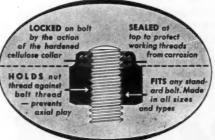
Well over a thousand horsepower spins through that coupling — through those six studs.

To connect that coupling, oldstyle lock fastenings wouldn't do. They couldn't both lock and be tightened to spread the load evenly. So studs failed.

The solution shows in the photo – Elastic Stop Nuts.

With these fastenings, uniform pressure was obtained as well as complete security against nuts working loose.

In the peacetime production to come, equally puzzling prob-



lems will plague manufacturers.

And we are prepared to help. Our engineers who today are solving war production problems will be ready to share their wide experience with you.

Whenever you have a fastening job let us know. Our men will work with you on it and recommend the correct Elastic Stop Nut to produce a better product or to facilitate its manufacture.

ELASTIC STOP NUTS

Lock fast to make things last

ELASTIC STOP NUT CORPORATION OF AMERICA, UNION, NEW JERSEY



"CHI" FLEETS SHY AWAY FROM WOMEN

(CONTINUED FROM PAGE 106)

unusual working conditions in many fleet shops as compared with the average modern factory or war goods plant. That is, many such shops are reported to have poor lighting, much grease and dirt about, scattered junk piles, air polluted with exhaust fumes, and otherwise uninviting because of the excessively cold air temperatures in winter and excessive heat in summer. He also was doubtful whether the average woman worker would be willing to pass through the essential apprenticeship period of six months to a year before she could expect to be earning the wages of a skilled mechanic.

Women Stevedores

The outstanding Chicago example is the employment of women workers in the dock handling of motor freight is by the Chicago Tunnel Company. Superintendent M. P. Burke had had some previous experience in the employment of Chicago women workers during the period of World War I. So when it was becoming more and more difficult for him to hire and keep competent men dock workers, and when it became necessary to require an excessive amount of overtime labor from his men workers, he decided to try colored women workers on one of their hardest shifts—from 12 midnight until 8:30 a.m.

As the first problem, he discovered that the Chicago branch of the U. S. Employment didn't at this time (in September, 1942) have any set-up for the handling of colored women workers. So the initial employment of about 85 such workers was carried on through a private employment agency. It was decided that candidates should be between the ages of 21 to 31, that they must be physically qualified for the fairly heavy work, and all must be able to read and write. No standards were set as related to their marriage status.

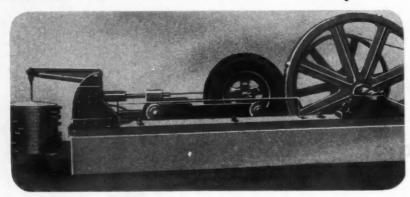
An analysis of the successful applicants showed many were high school graduates; only 10 per cent of them ever had previous employment except in domestic work, and about 70 per cent were married. The married women who had children seemed generally to prefer working on the midnight rather than a day shift, since this would keep them away from home only during hours when their husbands (most of whom were doing day work) could remain with their children. As to clothing, they were advised either to wear slacks or overalls, and also to wear heavy comfortable shoes, which often were borrowed from the men at home.

It was found that these women, most of whom were working at their first job, were very sensitive to observation. Hence no other class of employees, excepting the few essential supervisors, were mingled with them and absolutely no visitors were allowed.

It was also made emphatic from the very start, that a "no-loafing" rule would be enforced. The enforcement of this rule was aided through making it known to these women workers that they were in patriotic service essential to the war effort. Enforcement also was aided through the discharging very soon of three workers who were slack in their at-

(TURN TO PAGE 110, PLEASE)

TESTED in laboratory



PROVED on battlefield



Tires tough enough for war are more than a match for today's demands on commercial freight trucks. That's why Cooper truck tires, strength-tested in laboratory and proved on battlefront, can give your fleet performance-plus — longer mileage, fewer tire troubles, bigger value! Look up your Cooper dealer today. The Cooper Corporation, Findlay, Ohio.







The Changing World

* * Housewives riveting . . . office workers running intricate machines . . . men from every walk of life studying mechanics in the services. Yes, this is a changing world.

* * These are the people who will make up tomorrow's market ... a market keenly aware of mechanical perfection ... a market with the ability to choose outstanding roducts.

products.

* * * PAR Air Compressors will
appeal to this mechanically minded
America of the future. For the experience gained in our war assignments will be added to our wellknown ability and facilities in producing air compressors that are
outstanding in their fields.

Manufacturers of PAR Air Compressors

PAR



LYNCH MANUFACTURING CORPORATION DEFIANCE, OHIO, U.S.A.

"CHI" FLEETS SHY AWAY FROM WOMEN

(CONTINUED FROM PAGE 108)

tendance and in their attention to their assigned jobs. On the other hand the workers were stimulated by very good wages—that is, exactly the same pay as received by the men stevedore workers on the other two shifts.

It has been reported that the colored women workers are only 80

to 90 per cent as efficient in tonnage of freight handled as are the men workers on the other shifts. This apparently is because they are not so husky in handling the heavier items of freight, and they seem to tire more easily. However, from the viewpoint of management, there is some economy because considerable overtime previously had been required for the men crews, and it was found that the excessive overtime work was lowering the physical efficiency of the men workers and increasing absenteeism.

In contrast, the women workers, even on their midnight shift, have made much better attendance records. For instance on New Year's night, only four of the 87 women were absent from their work on the loading dock, and each one of these had telephoned in ahead that she could not be there because of illness. On the next shift, a much larger total of the men stevedores were absent from work.

After three months of experience with their women dock workers, officials of the Chicago Tunnel Company were so well satisfied with the economy results that they increased the number from about 85 to 115; and they also stated that they probably would soon double this total by hiring another exclusive crew of women for another entire working shift. They stated that they had had many additional applications, and that there apparently was a large available supply of such Chicago workers.

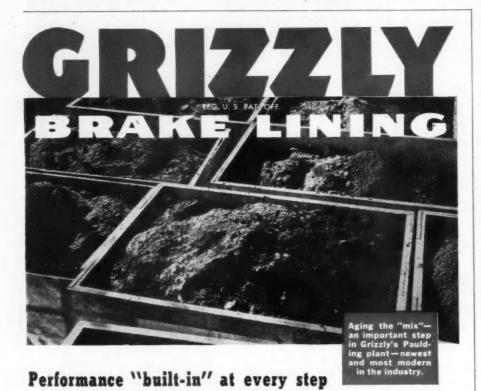
Traffic Course Sponsored

Some time ago the Central Motor Freight Association, Inc., one of the largest of the state associations affiliated with the ATA, appointed a committee to investigate the possibility of developing a practicable course of study, to help meet the pressing shortage of trained personnel needed in the truck tariff and rating departments of common carrier motor trucking companies operating under state and ICC regulations. The committee recommended that such a course of study apparently could best be handled by a specialized school (the College of Advance Traffic) which had long been in existence in Chicago, but which previously had been giving its attention exclusively to such training in the field of rail traffic.

One of the advance stipulations of the association was that this new course in motor traffic and rating should be open to women as well as to men. This new six-week evening course of study became one of the first of its kind in the United States to be sponsored by a trucking association. It is reported that about half of the students in the classes now in progress are women, most of whom are already employed during day hours by Chicago motor trucking companies.

END

(Please resume your reading on P. 38)



In Grizzly Brake Lining each step of scientific compounding, processing and finishing is reflected in the fine quality of the finished product.

Grizzly Brake Lining is a solid, friction-retaining asbestos compound, full-moulded on a firm wire-grid back. It is non-glazing and non-abrasive; unaffected by heat or water. It cannot separate or roll up. Thus, it provides greater resistance to wear, plus softer pedal and more efficient braking in all types of brakes under all conditions.

The outstanding performance of Grizzly Brake Lining is the result of 27 years of "STOP" engineering, plus the most modern and precise methods of manufacture in the brake lining industry.

The thousands of shops who use Grizzly Brake Lining, and the hundreds of jobbers who sell it, acclaim its "built-in" performance—a quality that is uniform throughout the entire Grizzly line of Rolls, Segments, Sets and Blocks. Use this product of recognized dependability. Investigate Grizzly—now!





National SAVIT Service makes a clean engine which develops more power, stands the gaff of more hours and harder pulls, uses less fuel and oil, and cuts maintenance "time-out" to a minimum—a veritable "Miracle of Today"

in making your operations more positive and more profitable.

National SAVIT Service with National Periodic Inspection Service, keeps your fleet operating at top-notch efficiency with high conservation of man power.

Write today for free samples of National Periodic Inspection Service forms . . . and with them the complete story of National SAVIT Service.

* Copies of a new series of folders, "Miracles of Tomorrow", are yours for the asking —free. Send for them today.



NATIONAL EN-AR-CO MOTOR OILS and LUBRICANTS
NATIONAL WHITE ROSE GASOLINE

THE NATIONAL REFINING COMPANY - CLEVELAND, OHIO

East of Ohio The Globe Refining Company, Cleveland, Ohio

OPA USED TRUCK PRICE CONTROL

(CONTINUED FROM PAGE 58)

the seller is prohibited from falsifying the value of the vehicles or products or commodities received in trade, increasing the "value when new" by attaching or exchanging bodies or extras, except as provided in paragraph (b) of § 1360.507; or from making any change in terms or conditions of sale, except in accordance with paragraph (b) of this section, or in any other manner.

(b) The Office of Price Administration may upon request grant written permission to any dealer subject to this regulation to change the credit terms or terms of guaranty previously extended, where such change appears necessary because of conditions caused

§ 1360.511 LABEL OR TAG TO BE ATTACHED BY DEALER TO VEHICLE. Every dealer offering a used commercial motor vehicle for sale shall attach to it in a conspicuous place a label or tag not smaller than 4" x 8" in the form set forth in § 1360.520, Appendix A, on which shall be set forth legibly all of the information called for in Appendix A.

§ 1360.512 SALES INVOICES TO BE FURNISHED TO PURCHASER. Upon the sale of any used commercial motor vehicle the seller shall give to the purchaser a sales invoice or receipt showing:

(a) The name and address of the seller;

(b) The name and address of the purchaser;

(c) A description of the vehicle, specifying make, year, model, motor or serial number, wheel base, body or type, and extras, if any;

(d) The date of delivery to the purchaser;

(e) The sales price:

(f) The maximum price determined in accordance

with this regulation, indicating the computation of the "base price" and the percentage factor used;

(g) The price for any extras added or alterations made at the purchaser's request, separately itemized as provided in § 1360.507 (b).

(h) The statement "guaranteed" or "not guaranteed" as the case may be;

(i) If a used vehicle is taken in trade, a description of such vehicle and a copy of the sales receipt received from the purchaser trading in such vehicle.

§ 1360.513 RECORDS AND REPORTS. Every person who sells a used commercial motor vehicle shall, so long as the Emergency Price Control Act of 1942, as amended, remains in effect, keep and make available for examination by the Office of Price Administration a copy of the sales invoice or receipt required in § 1360.512, together with a copy of the guaranty, if any, furnished in accordance with § 1360.506.

§ 1360.514 ENFORCEMENT. (a) Persons violating any provisions of this regulation are subject to the criminal penalties, civil enforcement actions, proceedings for suspension of licenses, and suits for treblo damages provided for by the Emergency Price Control Act of 1942, as amended.

(b) Persons who have evidence of any violation of this regulation or any price schedule, regulation, or order issued by the Office of Price Administration or of any acts or practices which constitute such a violation are urged to communicate with the nearest state, district, or regional office of the Office of Price Administration or its principal office in Washington, D. C.

§ 1360.515 LICENSING AND REGISTRATION—
(a) LICENSE REQUIRED. A license as a condition of selling is hereby required of every dealer now or hereafter selling any used commercial motor vehicle for which a maximum price is established by this repulation and of every person now or hereafter making frequent sales of such vehicles as an incident to his regular business. No person whose license is suspended shall sell any used commercial motor vehicle during the period of suspension.

(b) LICENSE GRANTED. Every person required to be licensed pursuant to paragraph (a) of this section is, by this section, granted a license as a condition of selling such used commercial motor vehicle. The provisions of this regulation and any amendments thereto, shall be deemed to be incorporated in the license hereby granted, and any violation of any provision so incorporated shall be a violation of said license. Such license shall be a violation of said license. Such license shall be effective on April 26, 1943, the effective date of this regulation, or whenever any person becomes subject to the maximum price provisions of the regulation, and shall, unless suspended in accordance with the provisions of the Emergency Price Control Act of 1942, as amended, continue in force so long as, and to the extent that, this regulation or any amendment or supplement hereto remains in effect.

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(c) REGISTRATION. Every person hereby licensed may be required to register with the Office of Price Administration at such time and in such manner as the Administrator hereafter by regulation may prescribe.

§ 1360.516 DEFINITIONS. (a) When used in this regulation, the term:

(1) "Person" includes an individual, corporation, partnership, association or any other organized group of persons, or legal successor or representative of any of the foregoing, and includes the United States or any agency thereof, or any other government, or any of its political subdivisions or any agency of any of the foregoing.

(2) "Dealer" means a person engaged, in whole or in part, in the business of buying, selling, repairing and reconditioning used commercial motor vehicles and who maintains a place of business for the display, sale, repairing, and reconditioning of such vehicles.

(3) "War procurement agency", includes the War Department, the Department of the Navy, the United States Maritime Commission, the Lend-Lease Section of the Procurement Division of the Treasury Department, and the following subsidiaries of the Reconstruction Finance Corporation; Ruhber Reserve Corporation, Metals Reserve Corporation, Defense Plant Corporation and Defense Supplies Corporation, or any agency of any of the foregoing.

§ 1360.517 PETITIONS FOR AMENDMENT OF GENERAL APPLICABILITY. Any person seeking a modification of any provision of this Regulation may

(TURN TO PAGE 114, PLEASE)



Removes top ridge in One Minute!

A real time-saver for your shop. The Lisle is easier to use, re-

quires no experience to turn out perfect jobs. The patented lathe

action follows worn cylinder contours even when the cylinder is

out-of-round; leaves walls straight and smooth, without lapmarks

or taper. Cut honing time and expense, make ring-fitting easier and

turn out better ring jobs by remov-

ing the top ridge the easy, accurate

way-with a Lisle Ridge Reamer.

Standard range, 2.6" to 4 inches. Oversize, 2.6" to 5 inches.

LISLE CORPORATION

Clarinda, Iowa

Please send Free literature giving

complete details on the Lisle Ridge

Address

Lisle Corporation

Box 1017, Clarinda, Iowa

Hot off the Press on MCCREARY TIRES!

MAKE UNFAILING DELIVERIES

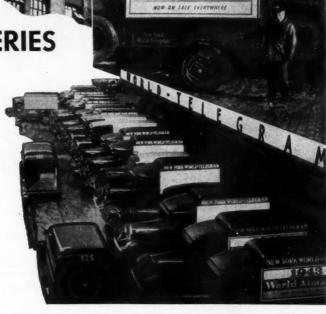
THIS great newspaper is rushed to its metropolitan public by hard-driven trucks—in all kinds of weather. This is tough, stopand-go driving—rough on brakes and tires.

McCREARY TIRES—many of them on their third recap—are doing this job, and well!

This is a spectacular fleet in a vital service— Sterrick Delivery Corporation handles its operation. JohnW.Rickert, president, says "After years of testing brands of tires too numerous to mention, we found that McCREARY gave the most and lowest cost mileage on this newspaper fleet."

The reasons? They are built right into the tires. Less internal heat, superior cord construction—no skimping of quality, materials or workmanship. And believe us, the years of constant contact with our distributors and recappers—have given us real help.

That's why McCREARY tires give more original mileage and take more recaps per carcass.



DON'T

"DON'T LET TIRES RUN PAST THE POINT WHERE RECAPPING IS PRACTICABLE"—Jeffers

The recapper can, and should be, the first assistant of fleet operators, large and small, when tire economy is considered. Today the recapper has reason to be proud of the service he is rendering. And—we are proud of the fact that for years we have distributed McCreary tires through the best recappers. We know what the recapper wants built into a tire! We feel that we are bis first assistant. If you are an established recapper we have something interesting to tell you.

McCREARY TIRE & RUBBER COMPANY INDIANA, PA.



MCCREARY
"Built for Longer Service"

I TIRES

OPA USED TRUCK PRICE CONTROL

(CONTINUED FROM PAGE 112)

file a petition for amendment in accordance with the provisions of Revised Procedural Regulation No. 1 issued by the Office of Price Administration.

§ 1360.518 TERRITORIAL APPLICABILITY. The provisions of this regulation shall be applicable to the United States, its territories and possessions, and the District of Columbia.

§ 1360.519 EFFECTIVE DATE. This regulation shall become effective April 26, 1943.

§ 1360.520 APPENDIX A: Form of tags to be attached by dealer when offering a used commercial motor vehicle for sale. (The Dealer shall be responsible for the reproduction of the tags.)

(a) Form of tag to be attached by dealer to a vehicle which is NOT RECONDITIONED AND GUARANTEED.

OFFICE OF PRICE ADMINISTRATION WASHINGTON, D. C.

Form Approved

Form No. 694:182a

The maximum price as computed on this tag is in accordance with the Office of Price Administration, Maximum Price Regulation No. 341, Section 1360.504, a copy of which is available for inspection.

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(2)															
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OFFICE OF PRICE ADMINISTRATION WASHINGTON, D. C.

Form No. 694-182h

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"RECONDITIONED AND GUARANTEED"

The maximum Price as computed on this tag is in accordance with the Office of Price Administration, Maximum Price Regulation No. 341, Section 1360.506, a copy of which is available for inspection.

"Value when new" \$...
Transportation allowance \$...
Extras (itemized below):
(1) \$...
(2) \$...
(3) \$...
(2) \$...
(3) \$...
(Etc.) \$...
Total base price \$...
Age: months.
Percentage of base price. percent.
Total maximum price before reconditioning \$...
Allowance, 5% of above maximum price. \$...
Total reconditioning (see guarantee) \$...

§ 1360.521 APPENDIX B: FORM OF GUARANTEE TO BE FURNISHED BY DEALER TO PURCHASER OF A RECONDITIONED AND GUARANTEED VEHICLE.
Form No. 694: 182c

Total maximum price \$.....

Form approved Budget Bureau No. 08-R359

OFFICE OF PRICE ADMINISTRATION WASHINGTON, D. C. GUARANTEE

The vehicle described below is guaranteed to be in good operating condition and to remain so under normal use and service for the mileage travelled in the first thirty days after delivery, not to exceed 1,000 miles. If any repairs to which this guarantee applies become necessary within the period of this guarantee, the undersigned must be informed of the necessity of repairs and must be given a reasonable opportunity to inspect the vehicle and to perform the necessary repairs or to designate another person to perform such repairs. It is the responsibility of the undersigned to perform or to pay for such repairs, provided that where necessary repairs are performed by a person other than the undersigned, reimbursement will be conditional upon presentation to the undersigned of the itemized bill rendered for such repairs by such other person. This guarantee does not extend to tires or tubes, or to any damage caused by misuse, negligence, or collision.

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Pistons for the ENGINES OF WAR



ON THE FIGHTING FRONT - ON THE PRODUCTION FRONT

From mine, factory and farm to the battle-field, this is a mechanized war powered by internal combustion engines—engines for industry, agriculture, and transportation to speed our victory on the production front—engines for military vehicles, tanks, self-propelled guns, and planes to speed our victory on the fighting front.

For these engines of war, Pistons by Zollner

are delivering that superiority in performance and low cost maintenance synonomous with Zollner engineering leadership in heavy duty piston equipment.

Selected as original equipment in America's finest engines—and specified as standard for replacement service—Zollner Pistons, in war as in peace, maintain a performance record unrivaled in efficiency and economy.



To meet the greater needs for engine maintenance under the severe operating conditions of wartime, manufacture of pistons for repair service is being expanded in substantially the same ratio as war production for original equipment.

ZOLINER

The Universally Used Piston Equipment for Internal Combustion Engines - Both Gasoline & Diesel

ZOLLNER MACHINE WORKS . FT. WAYNE, INDIANA, U. S. A.

OPA USED TRUCK PRICE CONTROL

(CONTINUED FROM PAGE 114)

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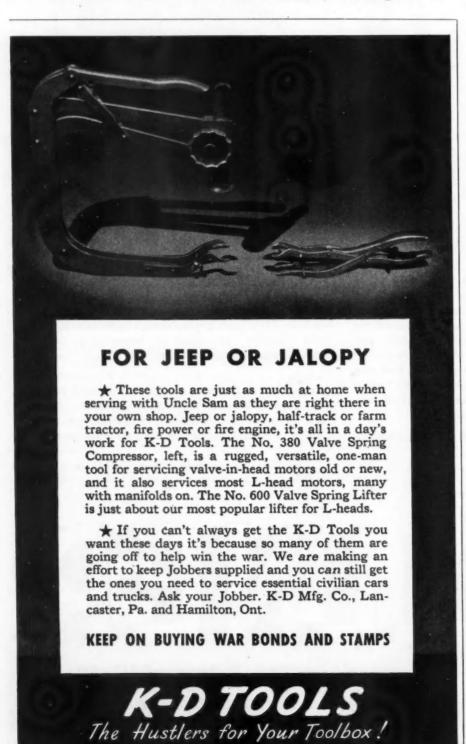
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NOTE: Purchasers are advised to retain this guarantee and also the sales invoice furnished upon this this sale for use in connection with a possible resale of the vehicle.

§ 1360.522 APPENDIX C: TABLES OF "VALUE WHEN NEW" PRICES. (ED. NOTE—There follow here more than 8000 truck model listings by make, rated capacity, serial number, wheelbase, base weight and price.)

END

(Please resume your reading on P. 59)



ACCIDENT PREVENTION

(CONTINUED FROM PAGE 49)

ment and in sensible road driving practices. The only way this can be accomplished is for the fleet operator to carry on with his drivers a continuous educational program in fleet safety. In such a program there can be little that is essentially new; and each individual operator must adapt these general safety principles to his own fleet conditions and needs.

Obviously, the only way to keep a safety educational program continuously before the drivers of an individual fleet is for the management of this fleet to be completely sold on the safety needs and also the operating economy of such a program. This viewpoint has become a basic principle with the Auto-Owners Insurance Co., as the first essential in any practicable program for our cooperation with a fleet operator in an accident-control program.

Our experience through the years has proved that a fleet safety program, to be successful, must contain in one form or another, these five activities, which we have ranked as follows as to their relative safety importance:

- 1. Sincere interest by top management in a planned safety program, and somebody in the company made definitely responsible for this program.
- 2. Careful selection and training of drivers.
- 3. Care in selection and maintenance of equipment, to insure maximum safety and operating economy.
- 4. Workable plan for collection and analysis of accident experience.
- 5. Keep "safety" constantly before drivers and other employees.

It is axiomatic that the management of a fleet, to become successful in the control of accidents, must become highly "accident conscious." The only sound basis for such a viewpoint is the realization that a practicable fleet safety program is in effect an efficiency program, since it can be demonstrated in general that the "safe way" in fleet operations is also the most direct and efficient way. Stated conversely, any trend toward excessive or increasing fleet accidents usually must be accepted as evidence

(TURN TO PAGE 118, PLEASE)



This poster, in color, is one of a series on the care of truck tires now available from your U.S. Truck Tire Distributor for posting in your garage where every driver can see it.

It is but one small part in the complete new system of "TRANSPORTATION MAINTENANCE" that is helping thousands of truck operators save rubber, cut costs and avoid delays.



CALL YOUR INDEPENDENT "U.S." TRUCK TIRE DISTRIBUTOR

UNITED STATES RUBBER COMPANY

1230 Sixth Avenue . Rockefeller Center . New York

ACCIDENT PREVENTION

(CONTINUED FROM PAGE 116)

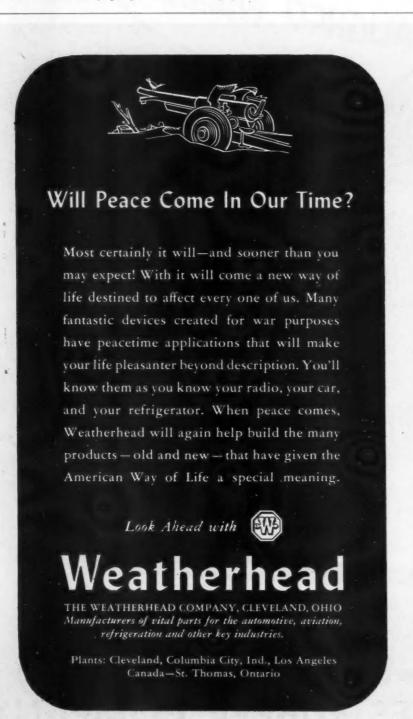
of management inefficiency or confusion. Hence it becomes the business of the management of a fleet with which our own safety department is cooperating to "find the cause" of such excessive or increasing accidents and then "remove the cause." This is what we call our "balanced" fleet safety program. The natural first step in such a fleet safety program is to select and train "safe drivers." We favor the practice, as with many smaller fleets, where the safety director also is the personnel manager or at least closely associated with the personnel department. It is our experience that a fleet with a minimum of 50 to 75 drivers usually should have a full-time safety director. That is, such a safety director usually will insure operating savings far in excess of his salary.

When a new driver is hired, his previous safety records should be carefully investigated. Contrary to some opinions, it is our personal belief that the best way to follow his references back to previous employers is with personal letters rather than with telephone calls. In a telephone call, there is a large chance that the conversation will be with some person who actually does not know the real reason why a former driver left his job or was discharged; or this person may be inclined to give their ex-driver a more favorable "send off" than is justified. In contrast, if a personal letter is written, a statement over a signature is more apt to be frank and reliable-and may be chiefly for the reason that the official who signs the letter will realize that he some time may want like frank information about a driver applicant.

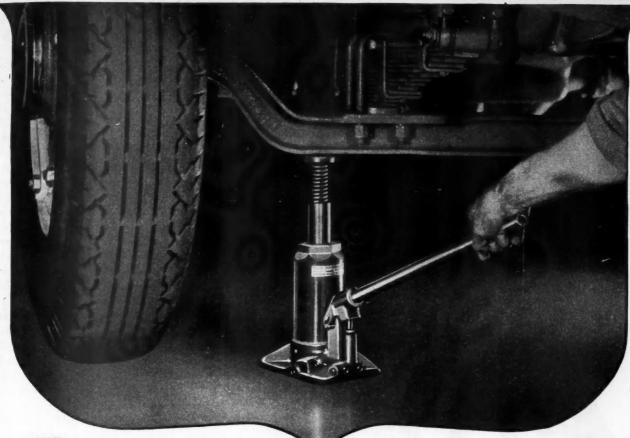
In such hiring, we believe selection tests are becoming increasingly important in choosing the type of 'good" driver who is most apt to develop into a "safe" driver. As a minimum, a thorough physical examination should be required, for the personal protection of the prospective driver as well as the safety protection of the employing company. We have been favorably impressed also with the use of certain simple aptitude and skill tests and we are working toward the adoption of the same as a part of the service of our Safety Department. We are already endorsing a test of eyesight through the use of the Keystone Telebinocular apparatus and methods.

Also for about two years our safety department has been recommending what we call "Practical Tests of Driving Manners," to be used either as a check on the driving ability of new prospects or as refresher training for older drivers who are having too many accidents or are being placed on new equipment.

The three most promising sources for new drivers to meet the increasing present-day scarcity, seem to be older drivers, colored drivers and women drivers. Our company experience has shown, in general, that drivers over 55 years of age usually have the better average no-accident record. But it is essential, in our opinion, that the employment of older drivers always should be actured to the property of the prope



SPEED UP DELIVERY OF WAR MATERIALS -- and you'll speed up the coming of V-DAY





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Cut down on time out to change tires on the road... Equip trucks with

HEIN-WERNER HYDRAULIC JACKS

Every minute saved in changing a tire may save hours and days in the completion of a war material order.

A driver never knows when he may have to change a tire—but when the emergency comes—it pays to have a super-powerful, fast, easy-operating Hein-Werner Hydraulic Jack in the tool kit.

H-W Jacks are available in models of 3, 5, 8, 12, 20 and 30 tons capacity.

For details and latest prices, ask your H-W jobber, or write us HEIN-WERNER MOTOR PARTS CORP.

HEIN-WERNER MOTOR PARTS CORP.
Waukesha, Wisconsin

HEIN-WERNER
HYDRAULIC JACKS
Are Built Right and Priced Right







20 Tons



ACCIDENT PREVENTION

(CONTINUED FROM PAGE 118)

companied by increasing attention to periodic physical examinations, and also the prompt shifting to other work of older drivers found with certain physical impairments.

As to colored drivers, our experences and observations seem to prove that when carefully selected and supervised they are efficient and safe As to women drivers, they apparently are fully as safe and reliable as men drivers, at least for the operation of light equipment. One overthe-road operator in California has been using women drivers on a long haul and has found them to be most efficient, and they are maintaining much better time schedules with lower operating costs.

It is obvious that the proper maintenance of motor equipment is becoming more and more of a safety problem, because of the increasing difficulties in getting new equipment, extra parts, and trained shop mechanics. From our viewpoint as an insurance company, we note a sharp increase in reported accidents due to the aging of equipment—such as wheels dropping off and tire failures; and also accidents possibly due to leakage of carbon monoxide gas. As a precaution against this latter hazard we are recommending the use of carbon-monoxide detectors in truck and tractor cabs.

Naturally, we advise the systematic collection and careful analysis of "driver accident experience." This does not mean burdensome accident reports. To the contrary, we often aid operators in simplfying their accident records; especially today when so many war-emergency records are being required. One possible step is for them to withdraw temporarily from sectional or national safety contests and concentrate only on a fleet driver contest. The basic requirement in such a contest is a careful record of the accident experience of each individual driver, including their most trivial accidents. This latter requirement is based on 27 years of company experience, which proves that the average driver who continues to be involved in small accidents eventually will have a serious accident. A real good driver will not have more than one accident in every two years.

In case of an accident, drivers should be coached as to the proper things to do, especially to obtain for his own company and the insurance company a complete and accurate report including sketches and witnesses

Closely related to the reporting of highway accidents, is the policy of "road trailing." We had largely abandoned this practice even before the recent OPA ruling, which disallows gasoline rationing for such travel. Our primary reason was because trailing does not seem to us to be the most direct approach toward a fundamental "removal of the cause" of careless highway driving or speeding. Also, even if a driver should be reported in violation of safe highway driving practices, it often is difficult or impossible actually to prove such violation or to enforce penalty. As a whole, we believe that other efforts will yield greater safety returns.

(TURN TO PAGE 122, PLEASE)



IMPORTANT



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Treat the engine with KARBOUT through intake manifold to dissolve gums which have formed on valve stems; then add RISLONE to the regular crankcase oil. Valves will be "freed" immediately. The quick KARBOUT-RISLONE "Tune-Up" will eliminate and prevent gum and sludge formations, restore lost sompression and power and assure a quieter, smoother running angles.

Keep Trucks and Buses Rolling...out of the Shop

Experienced successful fleet maintenance men all know that oil and fuel, under heat, cause gum formations. Normal operating conditions leave gum and sludge formations in all internal combustion engines. Today at slower speeds, gum and sludge formations accumulate faster and to a greater degree than in normal times.

Your fleet is an almost irreplaceable commodity and

should be kept rolling - not on the

maintenance costs—prolong engine life and help speed the flow of farm, Military, and industrial products so essential to ultimate Victory. THE SHALER COMPANY,

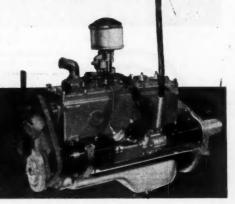
... Want a few helpful facts and pointers about LUBRICATION?

Then write for a copy of our 64-page illustrated book —ENGINE PERFORMANCE—it's FREE



Waupun, Wisconsin, and Toronto, Canada.

K A R B O U T R I S L O N E



ACCIDENT PREVENTION

(CONTINUED FROM PAGE 120)

Today we are especially concentrating on the continuous safety education of all drivers. These efforts include the use of safety posters, driver instructions in vehicle maintenance, driver training in what to do in case of accident, etc. We also recommend driver safety meetings, usually on company time and at periodic intervals, but not too often nor too long delayed.

Another important incentive toward safe driving is the presentation of safety medals and cash bonus awards for no-accident driving. We favor the use of National Safety Council no-accident awards, rather than a special company award that we might have designed, chiefly because the Council awards are more national and more interchangeable. Hence a driver, in case of change in employment, has a greater chance of adding consecutive years to his safety record. We believe that the vast majority of drivers are proud of their safety records, and earnestly strive to defend and improve their records.

We further believe that a driver who is essentially a safe driver should not be too severely penalized if he should chance to have an accident. Hence, we personally helped several vears ago to get started the plan, now recognized by the National Safety Council, of permitting a driver who does have an accident which thereby terminates a hoped-for no-accident year, to start the very next day on another hoped-for no-accident year, instead of having to wait until the end of the calendar year, as per the former requirement. We are also favorable toward the present recognized plan of permitting a driver, after he has had three years of noaccident driving, later to add additional years even though he may have the misfortune of an accident or two in between. That is, it might require seven years for him to completely earn a five-year no-accident medal.

We also have observed favorable safety results from the payment to drivers of cash-bonus awards for noaccident driving. We recommend the principle of the so-called "Progres. sive Bonus System." Under it, the fleet manager pays a driver 25 cents bonus for his first no-accident month (during which the driver also has "kept up the appearance of his vehicle" and so driven it that "an excessive amount of maintenance was not required") and then adds 25 cents for each additional no-accident month through 12 months. That is, for the twelfth month the driver gets a bonus of \$3.00; and, according to the plan, he receives \$3.00 for each additional continuous no-accident month. But if the driver should have a chargeable accident, he then drops back again to the original bonus of only 25 cents for the next no-accident month, 50 cents for the second month, and so on until he once more is getting maximum \$3.00 per month.

This bonus seems to stimulate noaccident driving; and it also has proved so attractive to some fleet operators that they are doubling these bonus amounts. That is, they are adding 50 cents for each additional no-accident month; and are paying a safety bonus of \$6 per

(TURN TO PAGE 124, PLEASE)



Champ-Items No. 407 Oversize and Standard Rear Wheel Studs, for trucks -used when threads are stripped or stud is broken off; or when wheel flange holes and axle flange holes are worn. Made of high tensile strength steel. (See your Jobber for list of sizes).

List price..... 20c to 35c each



Champ-Items No. 949 Self-threading Oversize Drain Plugs for all popular makes of cars and trucks. Here is a real life-saver when drain plug is stripped or lost.

No. 949A—½" Oversize for Chevrolet, Pontiac, Oldsmobile, and GMC truckList 30c each No. 949B—5%" Oversize for Buick, Hupmobile, and Packard. List 35c each

No. 949C —1/16" Oversize for Oldsmobile, LaSalle and GMC truck..... List 35c each

No. 9496—¾" Oversize for Ford, Studebaker, and Cadillac List 35c each



Champ-Items No. 404 Universal Speedometer Cable and Casing Assembly. A complete matched unit — only 6 numbers to fit all cars and trucks. Each unit consists of a cable and casing with all tips and ferrules attached and assembled. It matches the longest shaft in each group and leaves a little slack on the shorter

shafts. To-day's most popular short cut. List Price \$2.90 each. Licensed under U. S. Patent 1,649,310.

CHAMP-ITEMS, Inc. 6191 MAPLE AVE., ST. LOUIS, MO.





fleets are in the war, because this is a war on wheels. Trucks and buses are doing a more important job than ever, operating as carriers or conveyors of materials—parts—and war workers.

Delivery must be maintained "on schedule." With the extra miles, extra load, extra wear and tear through stepped-up wartime duties, it is more necessary than ever that every battery MUST BE ABLE TO "TAKE IT" AND COME BACK FOR MORE! Battery failures not only mean time lost, but waste of gas, oil and other critical materials.

your wartime maintenance costs with this fleet battery that's SPECIALLY ENGINEERED to deliver double duty in wartime duty. This battery does a more dependable, more economical job every mile and then stays on the job many extra wartime miles. LET US PROVE IT through actual trial-and-check in your own equipment.

Write Today for Complete Information
BOWERS BATTERY & SPARK PLUG CO • READING, PA.

BOWERS

DOUBLE DUTY BATTERIES AND SPARK PLUGS

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ACCIDENT PREVENTION

(CONTINUED FROM PAGE 122)

month, after the first year of no-accident driving.

Causes of Accidents

REAR-END COLLISIONS—A preliminary summary of the 1942 commercial fleet accidents reported to our company again emphasizes the importance of driver training and supervision. About 30 per cent of all 1942 accidents reported by both over-the-road (inter-city) groups of fleets were rear-end collisions; and we feel that these were due primarily to (1) "inattention" on the part of the driver, or (2) "driving too fast for conditions." Occasionally, of course, some other vehicle will cut in ahead and stop; but these cases are very few and a good alert driver can compensate for such a threat. Drivers often try to blame faulty brakes for rear-end accidents; but

our checking shows that in many cases where the brakes really had been faulty, the drivers had failed through long periods of time to report such faults. The proper correction by management is regular maintenance inspection and the keeping of maintenance records.

MISCELLANEOUS—About 22 per cent of our 1942 over-the-road accidents are classified as miscellaneous. Most of these accidents were off-the-road—at a terminal or dock, in an alley, at a curb, etc.; and a large percentage of them apparently were caused by failures of drivers to check their clearances.

BACKING—The third most important group of accidents were from backing; nearly 12 per cent for overthe-road fleets, and more than 28 per cent for city fleets. Here again, the evident chief causes were failure to check clearances or failure to get guidance assistance. Mirrors on both sides of the equipment help considerably, but they are not the entire answer to the problem. The driver and his helper still must do their part, since our studies indicate that backing is 13 times more difficult than other driving operations.

SIDE-SWIPE—Nearly 12 per cent of the total accidents were the result of side-swipes. Most of these occurred at curves, on bridges or culverts, at tops of hills, or during bad weather when drivers were crowding the center line of the road.

TURNS—Approximately 8 per cent of the inter-city fleet accidents, were caused by improper or illegal turns, right and left; nearly 16 per cent of the city fleet accidents. Most of these could have been prevented had the drivers been in the proper lane, or taken just a little more care in making the turn. In some instances, the driver's judgment was poor in estimating the distance of on-coming traffic.

RIGHT OF WAY—Right of way at intersections caused about 7 per cent of accidents to the highway fleets and nearly 11 per cent of accidents to the city fleets. In most cases the contributing factor was failure to grant right of way to the other driver, or poor judgment as to clearance distance

SKIDDING—The next 7 per cent of the highway fleet accidents were caused by skidding, but only about (TURN TO PAGE 148, PLEASE)





QUESTION

Should One Air Brake System be Applied to All Types of **Commercial Vehicles?**

ANSWER

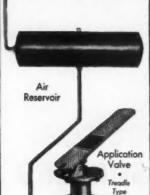
No! That's Why WAGNER **Makes THREE Distinct** Air Brake Systems

Because of the mechanical and structural differences in the many types and makes of commercial automotive vehicles, there is a need for more than one type of air brake system. That's why Wagner engineers have developed THREE systems — each one designed for a specific type of service.

All three of the Wagner air brake systems are similar insofar as the brake control equipment is concerned, but each system differs in the method of actuating the brakes. These differences are graphically illustrated below.



Wagner Rotary Air Compressor

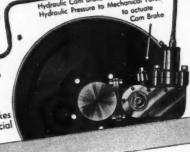


CONTROL **EQUIPMENT**

All three of the Wagner airbrake systems employ the famous Wagner Rotary Air Compressor known for its economy and high efficiency, an airreservoir, and a metering appli-cation valve which can be either lever, push or treadle type.



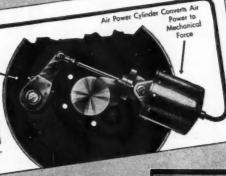
1. WAGNER "HYDRAIR" SYSTEM for Cam Brakes Provides air-powered hydraulic actuation for commercial vehicles equipped with cam-operated brakes.





CAir Enters Here Slack Adjuster Applie from Application Valve lem Requires one Wagner Po inder and one Slack Adjuste th Wheel Brake

3. WAGNER STRAIGHT-AIR SYSTEM for Cam Brakes —This system provides air-powered actuation for commercial vehicles equipped with camoperated brakes.



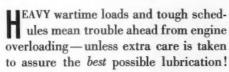
Wagner Electric Corporation 6100 Plymouth Avenue, Saint Louis, Mo. U.S.A.

BRAKES . MOTORS . TRANSFORMERS . FANS

Bulletin KU-50 explains and illus Butterin NO-30 expresses and instructes the three Wagner air brake systems. Everyone responsible for the operation, maintenance and manufacture of commercial vehicles should have a copy. A post card will bring it.

WOLF'S HEAD HEAVY DUTY OIL

is made for severe heavy duty service



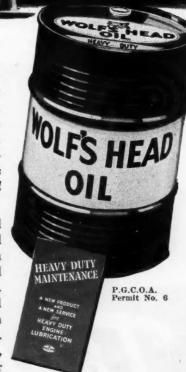
Wolf's Head HEAVY DUTY Oil was designed specifically to stand up *longer*—protect engines *better*—in severe heavy duty service. All tests show that it is doing the job!

Finest 100% Pennsylvania Oil, scientifically engineered to combine: (1) Tough film for lubricating efficiency; (2) high detergent quality for engine-cleansing ability; (3) resistance to oxidation, insuring longer safe drain period; (4) absolute safety against bearing corrosion.

Every good oil has these characteristics, to some degree—but Wolf's Head HEAVY DUTY ranks exceptionally high in all of them?

You don't have to rely on opinion. Hundreds of fleet operators who have been using HEAVY DUTY for a year or longer have proved the value of this oil. You can prove it, too, by laboratory-analysis tests made on used oil drawn from your own units, without interrupting their regular service. This testing is a part of Wolf's Head Laboratory Control Service Plan. (No charge!)

Find out now about Wolf's Head HEAVY DUTY Oil and the Wolf's Head Laboratory Control Service Plan—a team-up that protects the life of vital engines and also cuts operating costs. Recommendations cover type of oil needed by specific units, and the length of drain periods. Make a start today... a postcard will bring the free booklet, "Heavy Duty Maintenance." Send for it now!



WOLF'S HEAD OIL REFINING CO. . . . Addresses: Oil City, Pa. or 51 Madison Ave., N. Y.

"No More Trucks," said the Ration Board but TRUCKTOR saved our hides!

"WHEN the ration board set us down, I realized that it wasn't trucks that buttered our bread but what goes in them. I thought of how Trucktor Third Axles had doubled the payloads the Gadget Company used to carry."

"Then I brought form PD 310 to the ration board, told them how Trucktor saves vital

steel, oil, rubber, gas and drivers while it increases the payload and they took a different view this time."

Yes, Trucktors double payloads and save vital materials and manpower. But that's not all. They are easier on the road (consequently on the truck)



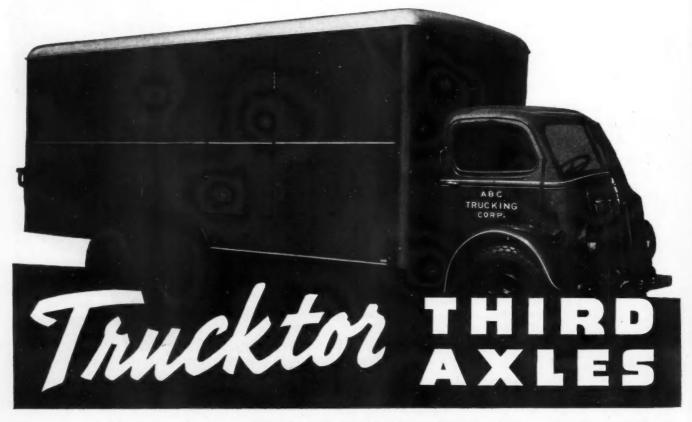
as Government Impact Tests prove. See for yourself How they make trucks last longer. Watch the springs and rocker arm as the truck rides a bump. The six point suspension spreads the load stresses along the frame instead of concentrating them in walloping big blows as ordinary springs do.

Insurance company reports say six-wheelers are safer. So does the I. C. C. And the army likes their maneuverability.

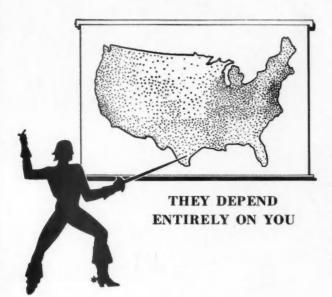
Write now if you need more payload capacity for your trucks.

THE TRUCKTOR CORPORATION

156 WILSON AVENUE . NEWARK, NEW JERSEY



54,453 COMMUNITIES MUST HAVE YOUR SERVICE



All American towns and cities require motor transportation. And, in addition you are the sole life line for 54,453 U. S. communities that have no other transportation service and are entirely dependent on you. That's a vital job—particularly now in wartime and we're out to help you in every possible way.

IT'S OUR RESPONSIBILITY

to see that you get the dependable heavy-duty parts you need to keep your fleet in top-peak, efficient wartime operation. Our parts must be as right for you as the parts we manufacture for Uncle Sam's fighting planes and vehicles. There must be no failures anywhere along the line these days.

MAKE EVERY OUNCE OF METAL COUNT

When you must have replacement parts, be sure to specify Toledo for longer life on the important job you are doing. These days, every piece of metal must do its part for Victory. So the watchword of the day is—conserve parts wherever possible. Make the available supply go around. With this kind of cooperation, we'll see this fight through together, and see it won.

The TOLEDO

STEEL PRODUCTS COMPANY

TOLEDO, OHIO, U. S. A.

SINCE 1906

Makers of Fine Automotive and Aircraft Parts



"Pennsylvanias keep 'em rolling for us!"

"For trucks and buses hauling for Victory, you can't beat the Pennsylvania Turnpike. Our records-and the experience of plenty of other operators that I know-prove that Pennsylvanias run cooler, and stay sound and strong to outlast tread after tread.

"Built-in features give Turnpike extra guts. The Long-Life Tread is the toughest that can be made under Government wartime regulations. The Supertest Cord is the same hightest, low-stretch cord used in Pennsylvanias for years . . . it makes these tires stand up for more mileage under tough conditions. And besides all this, the Pennsylvania Turnpike is Super-Pressure Cured. Every cord is impregnated, and the carcass is made more compact, to absorb wear and shocks.

"When we need recapping or other tire service, we look up the Pennsylvania dealer. We know he is competent, and will supply genuine Pennsylvania Penn-Craft retreading and recapping materials."Pennsylvania Rubber Company, Jeannette, Penna.





The New, Silent PENNSYLVANIA VACUUM CUP TIRE

Pennsylvania Rubber will always be known for its work in applying the vacuum principle in the tire field. The old Pennsylvania Vacuum Cup Tire was the greatest and safest tire the world has ever seen-but it was noisy.

Before Pearl Harbor, Pennsylvania had developed the new, Silent Pennsylvania Vacuum Cup Tire for passenger cars. Unquestionably the greatest step forward in tire engineering in this generation, the new tire will be available immediately after Victory.

See the amazing action through the glass road above. This new silent vacuum cup tread resists skid in any direction. It even reduces "normal" side-to-side weaving.

PENNSYLVANIA TIR

3 ALL-IMPORTANT REASONS

FOR HOLDING TRUCK MOTOR SPEEDS



STEWART-WARNER MOTOR-MILE TACHOMETERS Now Aiding the War Effort on Thousands of Trucks!

Every engine model has its own "economy range"—the range of motor speeds within which it develops peak efficiency. Above or below that range it uses fuel extravagantly. Only with a Stewart-Warner Motor-Mile Tachometer can your driver know that he is staying in that range at all times. Users report fuel savings as high as 25%—a worth-while contribution to the war effort!

Furthermore, the Stewart-Warner Motor-Mile Tachometer records engine revolutions on a

basis of "motor miles" instead of road miles, including all operation during "idling time." This makes it possible to service trucks on a basis of actual performance—achieves maintenance savings as high as 25%!

By thus guarding against neglect, these instruments protect you against costly delays due to breakdowns—delays which not only involve serious expense, but may easily disrupt vital war production schedules. Mail the coupon today for complete information!

STEWART-WARNER

MOTOR-MILE TACHOMETER

1876 DIVERSEY PARKWAY

CHICAGO, ILLINOIS



STEWART-WARNER CORPORATION 1876 Diversey Parkway, Chicago

I operate trucks. Please send complete information on Stewart-Warner Motor-Mile Tachometers.

State

Name

Address

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Firm Name

Quaker State HD's the oil-Take a tip* from Mr. Doyle!

DOYLE TRANSFER COMPANY

Daily Overnight Service

- . LOUISVILLE, KY.
- . BLASBOW, KY.
- MASHVILLE, TENN.

Glasgow, Kentucky October 16, 1942

Quaker State Oil Refining Corp. 011-6147 Pelmsylvania

We have been using your Quaker State H. D. Oil in our truck equipment for the past year; however, we have used this oil only in our best equipment, and that equipment used in making our longest hauls.

We recently signed up with the Truck Conservation Corps and immediately had all of our equipment placed in first-class condition. The trucks in which we used your oil needed very little repairs, only minor adjustments, and we decided to use your oil in our equipment exclusively, we decided to use your oil in our equipment exclusively, feeling that this was one way to assure continued maximum performance with minimum cost.

As long as this oil is available, we will continue to use it.

Yours very truly DOYLE TRANSFER COMPANY

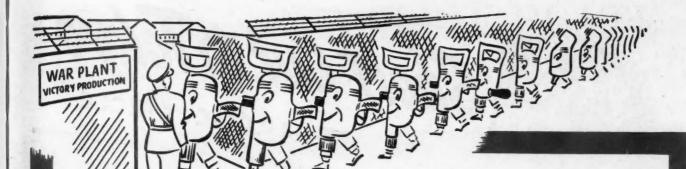
BY Suin Dayle

Quaker State HD Oil for your trucks, buses and tractors



Quaker State Motor Oil for your passenger cars **QUAKER STATE** 聞D OIL

QUAKER STATE OIL REFINING CORPORATION . OIL CITY,



NO ABSENTEEISM!



They've got "What it takes for long punishing service"

Designed for greater efficiency, lighter weight, increased power, and improved handling.

A Size for Every Need

Heavy Duty $1"-\frac{3}{4}"-\frac{5}{8}"-\frac{1}{2}"(2)-\frac{3}{8}"(2)-\frac{5}{16}"-\frac{1}{4}"$ 1/4" Low Speed Special 1/4" All Angle

Ask Your Jobber's Salesman

SIOUX ELECTRIC DRILLS

STANDARD THE

ALBERTSON & CO., INC.

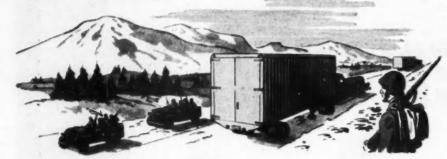


WORLD OVER

SIOUX CITY, IOWA, U.S. A.

Short of the state of the state





Alaskan "sourdoughs" said it couldn't be done when they heard that a modern, two-lane highway was proposed that would connect their ice-bound frontier with the industrial cities of the United States.

But the great Alcan Highway is finished! . . . A 2,000 mile engineering "miracle" that dropped weeks from an "impossible" schedule. Today,

trucks and trailers are rolling on this great highway, "highballing" supplies and munitions to air bases within bomber range of Japanese territory.

And in 194-? the Alcan Highway will be ready for a peacetime job. And so will Trailmobiles—the new, post-war Trailmobiles—carrying supplies and materials that this fast-developing frontier of America will demand.



In solving the problems of how to keep supply channels open to modern, fast-moving armies, facts are being uncovered . . . facts that will doubtless have important commercial applications. Much of this information is now set forth in a booklet entitled "Logistics—the Science of Moving Armies and Supplies." A copy is available, free of charge, to persons now engaged in the transportation of freight and merchandise.

IRAILMOBILE



Tomorrow's Trailmobiles are being built on the battle-fronts of today

THE TRAILER COMPANY OF AMERICA Cincinnati, Ohio Branches in All Principal Cities

-- Send for this free booklet!-

Pin this to your company letterhead and mail today for your free copy of "Logistics—the Science of Moving Armies and Supplies."

Name Position

NOTICE: Distribution of this book is restricted to persons now actively engaged in the transportation of freight and merchandise.



The Alcan Highway goes through country that was once labeled "impassable" to dog teams.

There are over 300 trailers organic to a complete Infantry Division of the U. S. Army.

When roads now under construction are completed, it will be possible to drive from Nome, Alaska, to Buenos Aires.

One of the wartime Trailmobiles carries two complete pontoon boats and equipment weighing over 20 tons.

There are more than 5,000,000 vehicles in U. S. truck fleets, more than all the rest of the world combined.

How a GLASS PIE PLATE

helped airplanes land at night!



THE Army and Navy wanted a new type of airplane landing lamp... like the G-E MAZDA "All-Glass" Sealed Beam auto lamps on your car, but with a practically flat lens to fit into the underside of a plane's streamlined wings.

To make the experimental model, General Electric engineers needed a certain sized piece of hard glass for the lens. They wanted it in a hurry. Rather than wait for a lens to be molded, they walked into a neighborhood hardware store and bought a Pyrex glass pie plate. Later they designed a filament that would give a beam of light twenty times more powerful than an auto headlamp, and a glass reflector that directed the light just where it was needed.

Finally, after weeks of intensive experiment, they developed the new G-E MAZDA Airplane Landing lamp, hermetically sealed against dust and dirt and impervious to the corrosive action of salt water and salt air. Today, on many fronts, these new lamps are helping our pilots get back to their fields safely.



G-E SEALED BEAM AUTO LAMP



G-E AIRPLANE LANDING LAMP

The same "All-Gloss" construction principles developed by G-E research for the G-E MAZDA "All-Glass" Sealed Beam auto lamp are used in the G-E MAZDA Landing Lamp.

Today more than 70 different types and sizes of G-E Mazda auto lamps are being produced to help keep the Army's vehicles rolling. Wartime conservation makes it important that your drivers get the most from their present truck lighting... particularly by cleaning lenses and reflectors and by making periodic headlight aiming adjustments.

G-E MAZDA LAMPS

GENERAL ELECTRIC



AIR GEARSHIFT

AIR STEERING

AIR CONTROLS

THERE'S NO CEILING ON SAFETY AND EFFICIENCY

Throughout the past few years, new highs in Safety and Efficiency have been established by Commercial Motor Transportation * We're pardonably proud of these records and fully aware of the penalty such leadership imposes. Thus every employee of Bendix-Westinghouse feels a personal responsibility in maintaining this position and goes about his or her daily task with a spirit seldom equaled * Second and third generations of Air Brake builders comprise no small percentage of this group which is as much concerned with your safety, efficiency and economy as you are * They're voluntarily studying the intricacies of Air Brake Construction in daily classes that you might find still greater reason to depend implicitly upon the Big Five of modern control - Air Brakes, Air Clutch, Air Gearshift, Air Steering, and Auxiliary Controls . . . that's why you'll always find genuine Bendix-Westinghouse Equipment waiting and ready to effectively dissipate any control problem.

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY

ELYRIA, OHIO

AN ORGANIZATION WHOSE UNDIVIDED EFFORT AND COMPLETE RESOURCES

ARE DEVOTED TO YOUR CONVENIENCE AND SAFETY



ice Plan will help you keep 'em rolling—longer! See him soon for all the details.

Join the U.S. THECK CONSERVATION COMPS

Heat-Vented



TRUCK AND BUS TIRES

Also manufacturers of Pontons • Reconnaisance Boats • Parts for Gas Masks • Bullet-Seal Tubes and Military Tires for our Armed Forces

SEIBERLING ON RUBBER IS LIKE STERLING ON SILVER



Most of your jobs aren't so dramatic

HAULING THIS cumbersome steel hulk thousands of miles . . . over mountains . . . across prairies to help sell War Bonds is a most ambitious trucking job . . . in a most worthwhile campaign.

Yes, a great job ... a dramatic performance.

But equally important are the *every-day* jobs which you and your trucks are doing to aid the war effort . . . hauling vital materials, munitions, and food.

Today, more than ever before, fleet operators are relying on the dependability and long life of better replacement parts to keep their vehicles on the road. And it is the greater dependability of Fiberglas*-equipped batteries that makes them the favorite with so many alert trucking companies.

... For, it has been definitely proved that Fiberglas-equipped batteries stay

on the job up to twice as long as batteries not so equipped(1). (See explanatory

illustrations at right.)

... These batteries stand up under severe vibration. This is an important reason why they are used in many armored cars, tanks and submarines.

...These batteries have excellent coldstarting characteristics and higher average power output during their greater life.

Today, the Army and Navy are demanding increasing quantities of Fiberglas Retainer Mats. Soon it may be difficult for you truckers to obtain all the Fiberglas-equipped batteries you need. If this happens, please realize the reason is that we are determined to provide sufficient Fiberglas for every vital wartime use—where Fiberglas is the only material suitable for the job.

Please also realize that in taking extra special care of your present Fiberglas-equipped batteries, you are conserving an important war material.



Left: Without Fiberglas Retainer Mats, power-producing material sheds to the floor of the battery, piling up sufficiently to short the cell,

Right: With Fiberglas Retainer Mats, active material is held in place longer on the battery grids, giving longer battery life and more constant power during battery life.

Owens-Corning Fiberglas Corporation, Toledo, Ohio. In Canada, Fiberglas Canada, Ltd., Oshawa, Ontario.

FIBERGLAS

BATTERY RETAINER MATS

(1) According to impartial tests conducted to meet S.A.E. specifications.



Give Breakdown Dangers a wide Detour!

SPECIFY CITIES SERVICE
SEALED LUBRICATION . . .

Now that your equipment must last longer and give you better service—don't take chances with *ordinary* lubricating methods.

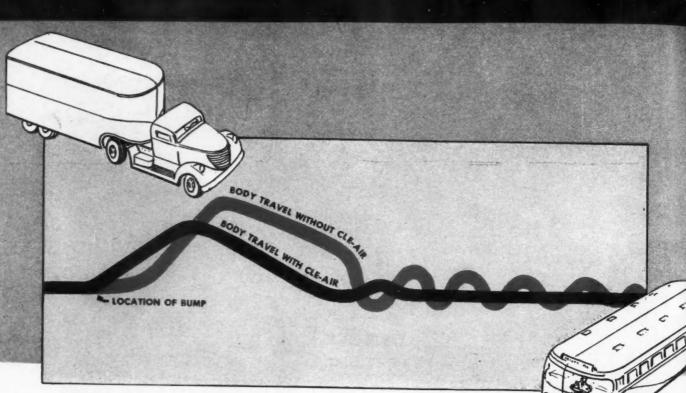
Insure longer mileage and lower fleet-operating costs by specifying Cities Service Sealed-Lubrication on all your future grease jobs.

Cities Service's tough, heat-resistant, water-resistant Trojan lubricants are sealed at the refinery in dust-proof cart-ridges—and are shot directly from these cartridges into your equipment. They're your best assurance of clean, trouble-free, long-lasting lubrication!

Send your fleet to Cities Service for this safer, better kind of lubrication today!

OIL IS AMMUNITION-USE IT WISELY!





HOW CLE-AIR SHOCK ELIMINATORS

Cushion ROAD SHOCKS Smother RECOIL

The travel chart above shows how a Cle-Air equipped vehicle rides gently over a bump and quickly recovers without recoil. In contrast, a vehicle with springs only is badly jarred, and continues to jolt up and down for some time.

UNIQUE DUAL-ACTION PROVIDES PROTECTION. Because they are both hydraulic and pneumatic, only Cle-Air units can give this ride of unmatched smoothness. A cushion of air absorbs the road shocks, while the hydraulic resistance of oil prevents recoil.

SUITABLE FOR ALL TYPES OF FLEETS. Cle-Air units are equally efficient on busses and trucks, as well as semi, full or special trailers. They do an outstanding job on all sizes of vehicles—from light to extra heavy duty.

PROMOTE FLEET CONSERVATION IN MANY WAYS. Cle-Air units reduce wear and breakdowns by "short-circuiting" shocks before they reach the body, chassis and springs. Tire wear is decreased because "sidesway scuff" and "buffing," due to rolling and bumping, are eliminated. Driver fatigue and load damage are also lessened.

Write for your copy of "Meet The Judge". This booklet, full of illustrations, diagrams and case histories, tells how Cle-Air units will protect your fleet.

CLEVELAND PNEUMATIC TOOL COMPANY Automotive Division

ASTER CRAFTSMAN IP IN EVERY DETAIL ances required for eviation work, Clo-Ak units, if properly serviced, will last as long as the vehicle. 

A recent publication by the California Railroad Commission includes some stop watch studies of typical freight runs between Los Angeles, Fresno and San Francisco. Trucks carrying observers operated 3,451.2 miles in a total running time of 6,885 minutes—2,067 of those minutes, or 30.18% of the time, in one of the lower gears. Incidentally, there were 3,279 gear shifts during the operation.

These figures demonstrate the importance of choosing transmissions with care. Fuller Transmissions are quiet, which means they are not subject to excessive wear when the gears are in use—and that's more than 30% of running time in the cases observed. That's why it pays to remember Fuller whenever you think about a heavy-duty job.



FULLER MANUFACTURING COMPANY . KALAMAZOO, MICHICAN

Wartime conservation service begins with WIRING AND CONNECTIONS

The Packard Certified Re-Wiring Manual, "Copper Nerves," was written before the war. Yet, because wiring and connections are such important factors in wartime conservation service, the information contained in this book is more timely, more vital, today than ever before.

"Copper Nerves" covers the entire electrical system, circuit by circuit. It explains how a faulty cable or poor connection affects the operation of other electrical units; it illustrates how to check for these "bottlenecks" by simple, accurate methods; and it shows how to make repairs and replacements that stretch the life of electrical units and conserve critical materials.

Packard continues to offer this book FREE to all fleet users of Packard cable. It will help you make best use of the cable that gives more MPR—more Miles Per Replacement. Packard Electric Division, General Motors Corporation, Warren, Ohio.



PACKARD CABLE SEES
ACTION ON EVERY FRONT
Trucks • Tanks • Armored Cars •
Jeeps • Landing Boats • Gun
Controls • Planes • Radio and
Communication Equipment



THERE'S MORE

MPR

(*Miles Per Replacement)
IN PACKARD CABLE



"Working for Victory"

THE STANDARD WIRING EQUIPMENT OF THE AUTOMOTIVE INDUSTRY



THE WORST CUT OF ALL!

Yes-it cuts pretty deep when an old and trusted tire lets you down.

But, don't blame the tire. Blame neglect or hidden injuries - and call your Fisk Distributor.

Free Certificate Holder



Also includes space for entering the information needed every day for your "Certificate of War Necessity". Get one for each of your trucks from any Fisk Truck Tire Distributor. Fisk Distributors are known for the thoroughness of their truck tire service. The Fisk Preventive Maintenance Plan has saved thousands of vital hours for war industries and thousands of dollars for the fleets that move their materials.

Ask any Fisk Distributor about the Fisk Preventive Maintenance Plan. Whether it's time to repair, time to recap, or "Time to Re-Tire," follow the sign of the Fisk Boy to save money, time and trouble.



SEE YOUR TIME TO RE-TIRE Reg. U, S. Pat. Off.

TIRE DEALER

Division of UNITED STATES RUBBER COMPANY

New life-blood

FOR HYDRAULIC JACKS



THE ORDER OF THE DAYDRAIN! FLUSH! REFILL!

WITH WALKER HYDROYL-50

HERE, at last, is new "Life Blood" for all hydraulic jacks! This new oil alloy, developed by Walker, prevents interior rusting and corrosion... protects vital parts... preserves cup leathers and lengthens

jack life.

No matter what kind of jacks you are using, Walker Hydroyl-50 will improve their performance—make them last longer.

It is just as important to use the proper oil in a jack as in an automobile engine. More jacks are ruined through filling with brake fluid, crankcase drainings and improper oil, than from any other cause. Play safe!... periodically drain, flush and refill your jacks with Walker Hydroyl-50. It costs no more.

WALKER MANUFACTURING COMPANY OF WISCONSIN, RACINE, WIS.

Also Makers of Walker Exhaust Silencers



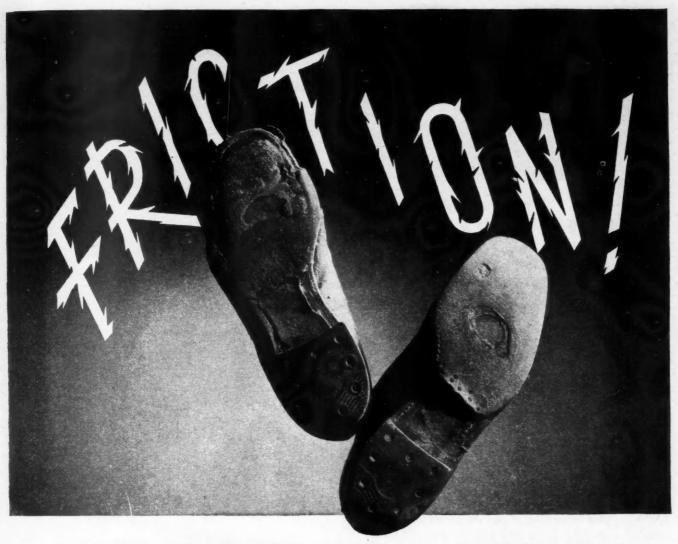


FREE MANUAL ON JACK MAINTENANCE

"Care For Your Jack For Your Country"—a 16-page manual on jack care and maintenance prepared by the Walker Service Department, tells you how to keep your jacks "on-the-job" for the duration. Ask your Walker jobber salesman for a FREE copy!

WALKER

LEADS IN JACKS



REDUCE WEAR AND REMOVE CARBON WITH MACMILLAN RING-FREE MOTOR OIL

Undue motor wear, waste of fuel and excessive carbon have no place in a sound preventive maintenance program. At the same time, "production" must be speeded up. That's why operators simply must pay more than usual attention to motor lubrication ... and motor cleanliness.

Macmillan RING-FREE Motor Oil cuts down waste and wear while speeding up performance, and at the same time, RING-FREE removes carbon!

In 1094 Certified Road Tests, with various makes of ownerdriven cars, 10 per cent increases in gasoline mileage were not uncommon after crankcases were drained and refilled with RING-FREE. As indicated by these tests, the average immediate saving was 1.3 miles per gallon! These tests emphasize that RING-FREE lubricates better...reduces friction faster. It delivers direct to the drive shaft more of the horsepower ordinarily wasted in overcoming motor friction. It postpones "down-time" for repairs.

Macmillan RING-FREE Motor Oil combines all these qualities: great film strength, high heat resistance, long cling to metal, fast penetration... plus the fact that it is non-corrosive, is less affected by dilution and it removes carbon.

CARBON REMOVAL A NATURAL RING-FREE FUNCTION
Macmillan RING-FREE Motor Oil actually removes carbon
while the motor runs! Hence, by its continued use, pistons, rings,

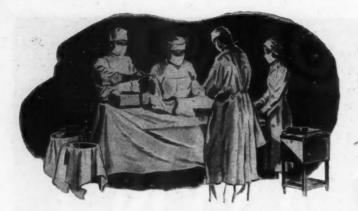
valves—all vital parts—stay cleaner. Carbon removal is a natural function of RING-FREE, inherent in the crude oil and retained by the exclusive Macmillan patented refining process, without the use of additives.

TO SUM UP: MACMILLAN RING-FREE gives more borsepower to the drive shaft—tangible saving of fuel—allows less wear on hard-to-replace engine parts—it removes carbon.

Macmillan Petroleum Corporation 50 W. 50th St., New York • 624 S. Michigan Ave., Chicago • 530 W. Sixth St., Les Angeles



REDUCES WEAR BY REDUCING FRICTION



A "SAFE" OPERATION

... performed on hospital sheeting, another Du Pont coated fabric that's gone to war

THE BEST in surgical skill and equipment is available for the wounded sailor on the operating table. An important part of the equipment protects him against an accidental ether explosion set off by an accumulation of static electricity. The patient lies on hygienic hospital sheeting, a Du Pont coated fabric which conducts electricity and makes it possible to ground any charge of static that may develop at this point.

This type of coated fabric made for the U.S. Navy is only one of many examples of Du Pont coated fabric production, which has gone all-out for Victory. Armored upholstery fabrics for aircraft, ships, tanks, trucks and combat cars—protective fabrics that safeguard the health and comfort of our fighting men—are flowing to every part of the world. They are products of the same Du Pont skill and experience which gave you "Cavalon" in peacetime.

The demands of our armed forces may make it impossible for you to secure the "Cavalon" coated fabric you need now. But remember that when the war is won, the developments in these materials today will bring you new and even better fabrics. E. I. du Pont de Nemours & Co. (Inc.), "Fabrikoid" Division, Empire State Bldg., New York City.

HERE ARE SOME OF THE USES FOR OTHER DU PONT COATED FABRICS ON OUR FIGHTING FRONTS

Raincoats
Hospital Sheeting
Food Bags
First-Aid Kits
Mountain Tents
Sleeping Bag Pads
Weatherproof Clothing
Jungle-Camouflaged Ponchos

Kapok-Filled Life-Preserver Jackets Covers for Transparent Plastic Aircraft Parts Fireproof Bedding and Clothing Bags Life-Raft Sails and Utility Fabrics

. . . and many, many others

""CAVALON" is Du Pont's trade mark for its synthetic coated fabric.



"CAVALON"

BETTER THINGS FOR BETTER LIVING . . . Through Chemistry





MA



ACCIDENT PREVENTION

(CONTINUED FROM PAGE 124)

half as many of the city fleet accidents.

HEAD-ON COLLISIONS—Less than 3 per cent of accidents to highway fleets were the result of head-on collision and about 3 per cent to city fleets. However, in most cases, these accidents were the most severe of all. Most of the collision accidents were caused by speed, too fast for conditions. "Taking a chance" was a contributing factor in many of the head-on collisions; attempting to pass without sufficient clearance, is typical.

In summary, I would say that drivers can prevent most accidents—if they develop the habit of constant alertness in attempting to compensate for the mistakes of the other users of the streets and highways. My general advice to drivers is: Do not take a chance. Let the other fellow have the right-of-way. Do not kill time. Never speed. Keep your equipment in repair. Do these things, and many of the accidents we now are having will not occur.

Also, it is our patriotic duty these days, as operators and drivers, to do everything we possibly can to prevent accidents, since to do so helps the War effort through the conservation of material and manpower, to say nothing of the many benefits we directly receive.

ENL

(Please resume your reading on P. 50)

CCJ NEWSCAST

(CONTINUED FROM PAGE 70)

Backlog Truck Sales Piling Up

During the past 15 months a total of 630,000 potential civilian truck sales have accumulated for peacetime business, according to F. F. Staniford, sales manager of Mack Trucks, Inc.

Basing his figures on an average of 44,500 truck sales per month during the years 1937 to 1941 inclusive, Mr. Staniford subtracted the civilian truck sales made during 1942 to arrive at his total. Roughly, six out of every 100 normal truck requests have been met in the past year, and this ratio is expected to hold for the duration of the war.

This means, according to the Mack sales manager's figures, that at the end of 1943 a backlog of well over a million potential truck sales will have accumulated. Every additional month of war adds 42,000 to this figure.



Millard E. Price, controller of Thompson
Products, Inc., Cleveland, was elected an
officer of the company at the annual
meeting of stockholders and directors
March 30.

Haige G. Haglund, sales manager of the Machine Tool Division of Van Norman Machine Tool Company for the past ten years, was appointed vice-president of the company, James Y. Scott, president, an-





The first synthetic rubber tire to be made entirely of government-produced materials was announced by the Goodyear Tire & Rubber Co. The tire was in the size for U. S. Army "jeeps". Its only difference from a conventional natural or synthetic rubber tire is the date molded into both sidewalls.



Herman C. Teetor, member of the board of directors, Perfect Circle Co., has been granted a leave of absence from the company to serve as Lieutenant in the U. S. Naval Reserve.



Advanced Driving Film by Fruehauf

The Fruehauf Trailer Co. of Detroit has produced the sound-slidefilm, "The Skill Behind the Man." It is a sequel to the film designed for driver training, entitled "The Man Behind the Wheel."

The new slidefilm stresses the importance and responsibility resting upon the shoulders of the driver in this wartime period. It also passes on to the tractor-trailer driver many of the clever tricks and driving kinks which have come to old hands through long and sometimes bitter experience.

The film was produced under the technical direction of Edson Smith, who has twice won national truck-and-trailer driving championships. Operators may make arrangements for a loan of the film by addressing the Fruehauf Trailer Co.

Fred Hall Leaves Bendix-Westinghouse and Joins Rogers Diesel as Sales Chief

The Rogers Diesel and Aircraft Corp., New York, N. Y., has appointed Fred L. Hall as vice president in charge of sales. Mr. Hall has been sales manager for the Bendix-Westinghouse Automotive Air Brake Co. for the past six years.

In addition to his imm diate concern with governmental contracts, Mr. Hall will be active in formulating plans and charting the course for post-war cales of the entire Rogers Diesel and Aircraft organization, which includes the Hill Diesel Engine Co., Lansing, Mich.; Edwards Co., Sanford, N. C., and Ideal Power Lawn Mower Co., Lansing, Mich.

Perfect Circle Announces Personnel Changes

The appointment of G. O. Bucklin and Robert M. Doxey to the Perfect Circle staff of district managers was announced April 2 by Don H. Teetor, Manager of Replacement Sales. Mr. Bucklin, formerly with Electric Auto-Lite Co., has been assigned the northern Ohio district with headquarters at Cleveland. He succeeds Jack Boddie, who resigned.

Mr. Doxey goes to Perfect Circle from Superior Motor Parts Co., Pittsburgh, Pa. He will take over Ken Sloane's territory in their upper New York area and will make Buffalo his headquarters.

Ken Sloane, who has worked out of Buffalo for Perfect Circle the last two years, will take over the Metropolitan New York District.

Wisconsin Dairy Group Plan to Save 422,670 Truck Miles

The ODT has approved a dairy industry transportation plan submitted by 3200 producers, 100 carriers and 28 processing plants located in the St. Croix County, Wis., milkshed.

Nonessential truck travel is eliminated by the plan and a conservation of 422,670 truck miles annually will be achieved, the ODT said.

Under the plan, market areas for the processing plans are zoned so that generally the milk from each producer is transported to the processing plant nearest the producer's farm in point of highway miles. Any price changes made have received the consent of the producers affected.

(TURN TO PAGE 150, PLEASE)



THE Canadian Johns-Manville mine is not only the world's largest single source of asbestos, but it's also a huge source of information about asbestos.

The knowledge acquired over the years from the operation of this mine is part of the J-M "know-how" that extends right from the mining and processing of asbestos through to the finishing of the product.

Scientific research and knowledge is part of this "know-how," too. For example, the Johns-

pictured above has studied intensively the braking problems of the automotive industry.

As a specialist in asbestos friction materials, he can be of valuable service to operators of busses carrying war workers to and from plants, and to drivers who are "keeping the trucks rolling."

Through the J-M Brake Survey Plan for fleet operators, he can help you insure the safest possible braking you've ever known. For full information on the J-M Brake Survey Plan, write to Johns-Manville, at New York, Cleveland, Chicago, St. Louis or San Francisco.

JOHNS-MANVILLE BRAKE LININGS

FLEET-TESTED SETS

BRAKE BLOCKS

CLUTCH FACINGS

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HOW TO SAVE

CRITICAL Materials and VALUABLE Parts

WITH KEY Graphite Paste

New or Old Gaskets and threaded parts can be preserved and re-used many times when protected with a light application of Key Graphite Paste... the ideal sealing compound for all connections where high temperatures and high pressures... oil-proof, gasoline-proof conditions (or combination of them) are involved.

Key Paste has no equal for sealing worn and battered fittings, as well as new. It expands when heated and packs up under pressure to fill out all irregularities...economical to use requires only water for thinning

... also ideal for all gasoline and oil dispensing equipment . . . Listed by the Board of Underwriters.

SEND FOR FREE SAMPLE . . . You can test Key Graphite Paste in actual service at no cost. Write for a liberal FREE sample of this compound — no obligation.

CRANKCASE GASKETS
TRANSMISSIONS
DIFFERENTIALS
GASOLINE LINES

BATTERY TERMINALS



2612 McCasland Avenue

East St. Louis, Illinois

SIGNS YOU CAN'T IGNORE



BRAKE PARTS
BRAKE FLUID
BRAKE TOOLS

TODAY more truck and fleet owners than ever are following the EIS sign—the sign of longerlasting brake parts.

The unchallenged durability of this famous line furnishes the answer to the present shortage of materials and labor.

Eis Brake parts conserve men and material—a two way saving. Economy for Uncle Sam — and for you.

EIS MANUFACTURING CO., INC., MIDDLETOWN, CONN.

CCJ NEWSCAST

(CONTINUED FROM PAGE 148)

Meehanite Moves to New Rochelle

The Meehanite Metal Corporation and the Meehanite Research Institute of America, Inc., announce the moving of their headquarters from Pittsburgh, Pa., to Pershing Building, New Rochelle, N. Y. The new headquarters will feature enlarged laboratory and research facilities, and will permit the rendering of improved service to industrial users of Meehanite Castings and the members of the Meehanite Research Institute.

Elastic Stop Nut Production Hits All-Time High

An all-time production record has been established by the Elastic Stop Nut Corporation of America, the nation's largest self-locking nut manufacturer, it was announced, with the previous daily production record topped by more than 1,000,000 nuts.

SKF Announces New Officers

Three executive promotions were announced by S. F. Wollmar, executive vice-president of SKF Industries, Inc., Philadelphia manufacturers of ball and roller bearings, following a recent meeting of the board of directors.

Thomas W. Dinlocker was elected vicepresident and treasurer; Richard H. De-Mott, vice-president in charge of sales, and C. P. Collins, secretary. William L. Batt, vice-chairman of the War Production Board, retains the presidency.

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New Type Steel Storage Tanks Planned for Petroleum Products

Improved steel tanks for storage or transfer of petroleum products will be available immediately after the war, according to officers of the Brown Steel Tank Company of Minneapolis.

The new tanks will not be duplicates of pre-war petroleum tanks but will include many new features of design and construction.

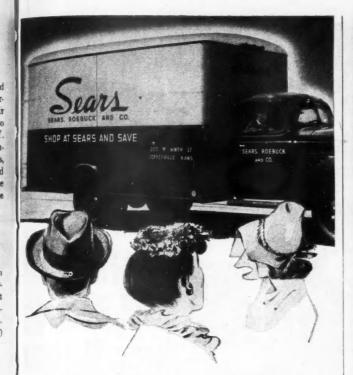
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(Please resume your reading on P. 72)



AIR COMPRESSORS CAR WASHERS LIFTS

Curtis Pneumatic Machinery Division of Curtis Manufacturing Company 1970 Kienlen Avenue, St. Louis, Missouri



DO YOUR TRUCKS TALK YOUR BUSINESS?

Today, America is Street-bound! Side-walking! Ration-shopping! Looking!—Buying!—America walks...but business must still ride to serve. What about your trucks? Do they carry the story of your product, your brand? Be sure they talk YOUR business! Make them representative of YOU!

Careful truck grooming and decoration is good business—and excellent advertising. Cash in on that free space on your trucks with Meyercord full-color Decals. Reproduce trademarks, products, pictorials, slogans, lettering, or patriotic morale builders. Meyercord Truck Decals are weather-tested. They assure uniformity, longer life, higher visibility and faster "over-night" application at a fraction of hand-painting cost. Competent consultation and design service—FREE.

Devote space on your trucks to Bond Sales. Write for details. Photo courtesy of Purity Bakeries.



MEYERCORD DECALS
THE MEYERCORD CO., 5323 W. Lake St., Chicago, III



ARM YOURSELF WITH C-D FOG ... NEW WEAPON FROM FAMOUS ARSENAL OF FIRE FIGHTERS!

Fire is an Axis ally. It must be fought, on land and at sea, in factories and on the road.

To help you fight fire effectively—General Detroit offers you C-D Fog, a new extinguisher that smothers fire in a chilly blanket of carbon dioxide. Harmless to materials, C-D Fog leaves no stain, is especially recommended for electrical and petroleum fires.

C-D Fog is made by the same people who give you Fire Guard, Alaskan, Flo-Foam, and other famous brands. This is your assurance both of dependable manufacture and production in sufficient quantities to meet all needs. Mail coupon today for full details. We will also send you free Fire Protection Kit and large, lavishly illustrated catalog.



Essential Service to Industry Since 1905
BRANCH OFFICES: New York, Chicago, Los Angeles,
San Francisco, Seattle
Distributors in All Principal Cities

Send me your catalog a nation wide acclaim.	nd Fire Protection Kit, which has receive
Name	
Company	Andrews and the second second
Title	
Address	The second secon
Cien	State



INNER-SEAL



Waterproofed WEATHER STRIPPING

Keeps out dust, dirt, drafts, snow and rain. A strong, durable weather stripping that lies flat against any surface, fits into corners and around curves . . . the only weather stripping with the essential spring-wire feature.

ALL-WEATHER PROTECTION FOR

INTERIORS OF HEAVY DUTY VEHICLES

Used for years by manufacturers of trucks, buses, passenger cars, taxis and trailers . . . convincing evidence of INNER-SEAL efficiency.

BRIDGEPORT FABRICS, INC. BRIDGEPORT CONNECTICUT

Established 1837

Undersize or Odd Size Bearings in Two Minutes This speedy, accurate and simple Machine

This speedy, accurate and simple Machine bores individual bearing shells to any predetermined size and also resizes eccentric bearings. Takes less than two minutes to produce any job with mirror finish.



TOBIN-ARP Shell Bearing Boring Machine

Full details sent upon request

TOBIN-ARP MFG. CO.

913 Washington Ave. S.

Minneapolis, Minn.

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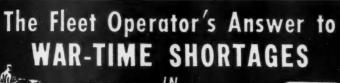
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MEN... MATERIALS... EQUIPMENT

Helps Protect Your Radiators!

Radiators are getting to be scarce equipment today. That is why it is so important to take good care of yours by keeping them free from grease, dirt, lime-scale and rust deposits.

Fast-working, safe Oakite Penetrant will HELP YOU do this easily, economically. It thoroughly, quickly removes these insulating accumulations to restore normal cooling efficiency... and does it without harming metal surfaces! For removing unusually heavy lime-scale deposits, use Oakite Compound No. 32 as directed by our nearby Technical Service Representative.

FREE, 36-page booklet gives details on this and 17 other essential fleet maintenance jobs. Write for YOUR copy TODAY!

OAKITE PRODUCTS, INC.
26B Themes Street, New York
Technical Service Representatives Located in All
Principal Cities of the United States and Canada

OAKITE

DEGREASING

-speeds

FLEET MAINTENANCE

QUIZ ANSWERS

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ric

Questions on Page 72

1. b. He was a racing driver—known from coast to coast in the decade before World War I. He had designed a light car which interested the great promoter, W. C. Durant. Durant started to manufacture the car and chose the familiar name "Chevrolet."

2. b. The name is derived from the initials of Ransom E. Olds, of Oldsmobile fame.

3. b. Oshkosh-for Oshkosh, Wis., where it is manufactured.

4. c. The "Diamond" is for quality, and the "T" is for Charles Arthur Tilt, founder and president still of the company. He started Diamond T 38 years ago in the rear of a one-story Chicago garage.

5. a. Autocar. The first automobile truck was designed and built in Pittsburgh in 1898 and 1899 by Louis S. Clarke and his associates. They organized as the Pittsburgh Motor Vehicle Co. and later incorporated as the Autocar Co., moving to Ardmore, Pa.

6. c. This truck name is taken from the initials of the Four Wheel Drive Auto Co.

7. c. The International truck, produced by International Harvester. International Harvester dates its history back to the invention of the first reaper by Cyrus Hall McCormick in 1831. The McCormick Harvester Co. was combined with several other companies in 1902 to form the International Harvester Co. Fowler McCormick is now president.

8. d. The name was International Motors until Durant on the manufacturing side and the Morgans on the financial side disagreed over legal technicalities in the formation of the new company. Then, so the story goes, Perkins of J. P. Morgan Co. sent a message to Durant requesting that he refrain from using the name International Motors over any company he might organize, Perkins claiming the name to be his own, as he had suggested it. Durant just reached for a pencil, crossed out the word "International" from a letterhead on his desk and wrote in "General." And so was born a name that has come to be familiar around the globe.

 a. From Thomas H. White, founder of the company back in the days of the steam cars.

10. d. There were five Studebaker brothers who entered into the fortunes of the company during its wagon-making days in the 1800's . . . Henry Studebaker, Clement Studebaker, John Mohler Studebaker, Peter Everst Studebaker and Jacob Franklin Studebaker.



One of a number of 55 ft. tugs that have been hauled from Jacksonville, Fia. to San Francisco, Cal. by the J. H. Rose Truck Line of Houston and Los Angeles



from Africa

Eddie, before he went to war, was assistant shipper at the Wiry Joe plant in Pawtucket. Writing from somewhere in Africa, he says:

"I never thought that I would see any of our wire again, but every place I go it just naturally follows me.

"We use it for different things on our radios."

Army radios and other communications equipment are not the only war-time uses for Wiry Joe wires and cables, however. They are used also on tanks, jeeps, trucks, and aircraft. And you'll find lots of Wiry Joe power and welding cables in service at shipyards and munitions factories, too.

All this, combined with definite shortages of rubber, copper, tin, and lacquer, means that the amount of Wiry Joe wire and cable available for commercial vehicles is strictly limited.

Present automotive wiring, therefore, must be made to last as long as possible. Check the wire on every job that comes into the shop—and make repairs before replacements become necessary. Also, Victory demands that no automotive wiring be replaced if it can be repaired. The government has even issued an order to this effect—L-158.

With Victory, unlimited quantities of Wiry Joe wire and cable will again be available. But until then, the watchword is CONSERVATION.

Check the wire on every job...





IN WAR SERVICE ...

Pulton Electric Sleet-Frost Shields and rubber-bladed Defroating Fans are on duty today on thousands of trucks and ears, in many lands . . . providing clear-vision driving safety regardless of weather. This, too, is an important war service.



Fulton Electric Sleet-Frost Shield We made 'em before . . . and we'll make em again . . . when Victory is won.

THE FULTON COMPANY 1912 So. 82nd St., Milwaukee, Wis.



BATTERIES

built for REPLACEMENT SERVICE GLOBE-UNION INC., MILWAUKEE, WIS.



MODERNIZING SHOP

(CONTINUED FROM PAGE 54)

ment is a valve grinder, a boring bar, two hones, piston aligner, chain hoist and track and a lathe. Our chemical de-greasing tank is one of the most important labor saving devices that we have. It cleans quickly and thor-

Adjoining the main shop is our lubrication department and wash room. There is a 30 ft. ventilated pit for greasing. A large compressor in this room supplies air for tire inflation, lubricating equipment and other shop requirements. The pressure lubricating equipment carries all various types of greases for our various units. We also have portable lubricating equipment for greasing trucks being serviced in the main shop, so they may get back on the road quickly.

We use water under pressure and a steam cleaner in the wash room. The latter is a high-speed method of removing grease and grit from the outside of the chassis. A high pressure electric booster pump on the wash line forces steam through fast, and makes a quick cleaning job. We also extend pipes from the steam cleaner into the pit so the workmen can clean differential and transmission housings while the truck is being lubricated.

We clean all trucks with steam when weather permits. In extremely cold weather we cannot use steam cleaning inside, as the ventilating unit cannot carry off the excess steam and this would interfere with visibility inside the shop.

To avoid overloading our trucks we installed a scale on the service station lot. The scale has 42,500 lb. capacity and is used to weigh each axle load. It is located about 50 ft.

(TURN TO PAGE 156, PLEASE)

"A load behind is a trip ahead"

IMMEDIATE DELIVERY

on Open and Closed Top

RAILERS

AND CHASSIS

National Sales- Mingham - National Service

KINGHAM TRAILER CO. LOUISVILLE, INCORPORATED

KENTUCKY

R

KINNEAR ROLLING DOORS FOR TRUCKS

Save space! Open upward! Coil out of way. Always safe from wind. Can't joggle open! Less chance of damage to doors All Metal. Fireproof! Prevent thefts. Write for details.

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- ★ 20 ball-hinged levers for uniform pressure, smooth engagements, easy pressure, smooth engagements, easy disengagements.

 Parallel disc contact. No localized burning. Long facing life.

 Warp-resisting pressure plate.
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Repair, Rebuild—Conserve! Keep 'em Rolling-Longer

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RECAPS OR NEW-KNOW YOUR TIRES!



Are you in position to keep the proper service records of the recaps or new tires you may be granted by your ration board? These records are important.

There is an easy way to do this. The EVERHOT Electric Branding Iron with ten digits (0-9) makes it possible to put your own number on each tire or the serial number on both sides in larger figures where they can be plainly seen—

The Branding Iron together with the EVERHOT TIRE RECORD SYSTEM (free to Everhot users) will give you at all times the information you want.

Priced at \$35.00 f.o.b. Maywood, Illinois.

Start now to keep consistent and accurate tire records. Send today for literature and sample forms.

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MILWAUKEE, WISCONSIN



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To cut operating costs by making batteries last longer and perform better, install Kathanode, the original spun glass, heavy duty battery.



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Used on bomber and fighter planes to operate brakes and machine guns. Precision workmanship assures long, dependable service without frequent parts replacement.

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FOR 22 YEARS Manufacturers of . Electric Motors Electric Motor Grinders Battery Chargers Fast Battery Chargers Battery Testers Write for Bulletins ALDOR ELECTRIC COMPANY





MODERNIZING SHOP

(CONTINUED FROM PAGE 154)

from the loading platform. This is convenient to the driveway and the two gasoline pumps, which are used exclusively for our own cars and

Welding

We are doing more welding now than ever before. We cannot afford to keep waste on the pay roll. Recently we welded an engine block that was cracked from end to end. A new one costs \$100 but we could not get one. With \$2 worth of welding material and five hours of labor, we had it back in use.

We save old tire carriers, angle and channel iron and bars. We cut these up with the acetylene and use them to repair and reinforce frames and cross members; weld broken sections in metal-covered doors of cabs, cracked fenders, broken shackles, etc.

We use two acetylene welders and one arc welder in the main shop, and recently put another electric welder in the body shop. Our stock of spring leaves and rebuilt spring assemblies is kept to adequate levels. These salvaged units consist of sizes that we can use on our trucks and enable us to replace single broken leaves or a complete assembly.

Battery Maintenance

We check all batteries for charge on the lube lane with a fast charger. If low, we recharge with the fast charger. The fast charger is satisfactory for this purpose. It saves the time and work removing batteries from the chassis and replacing them. If one inspection shows a possible basic weakness, the battery is taken out and put on the slow charging (TURN TO PAGE 158, PLEASE)



HEAVY DUTY FOR OFF THE HIGHWAY SERVICE

— Specially Designed for —
Coal Mining—Iron Ore Mining—Copper
Mining—Pit and Quarry—Logging—Oil
Fleids—Etc.
it Costs No More for Trucks Specially
Built to Fit Your Needs. Have Our Engineers Visit and Analyse Your Operation.

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- → COST LESS

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Write for Descriptive Matter

LMETA UNIVERSAL JOIN

We regret that it is impossible to give you our usual good service on ALMETAL Universal Joints. There are many reasons for this-restrictions on material and war conditions-older cars and trucks require more parts. We shall do our best to serve you now as in the past, and if there are delays, please understand that they are due to causes beyond our control.

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Snugl Fade-away BALANCE WEIGHTS

will make your rationed tires or recaps last longer. In these days ber it is patriotic as well as eco-



nomical to make each ounce of rubber count. Do your bit. Keep 'em rolling by using Snugls—THE WEIGHTS THE GOVERNMENT USES. They have a dove-tail clip that cannot rattle or work loose. Easily installed. Sizes ½ oz. to 1½ lbs.

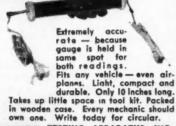
Ask your Jobber or write us direct. Manufactured by

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TOE-IN" Measuring Gauge

Easier to Use!

The Micro-Linor Toe-in Measuring Gauge requires only one man to operate it. Just attach the grip-pers to the rims and take front reading. Then roll vehicle forward and take rear reading. All done in less than 2 minutes.







1621 W. Fort Detroit Michigan

Our Plant is working to capacity on "KING" Testing Equipment for the Government, and we regret that we cannot give our customary good service. However, we can ship most orders with the required priority rating.

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MOBO AUTO SOAP

—Keeps trucks, buses and cars mirror-bright, and cuts down necessity of repaint jobs. Lathers quickly, freely and rinses in hot or cold water in a wink. Easy on finishes because of its 100% pure base of mild vegetable oil. Economic tool. nomical, too. Order a supply today.



MOBO DEGREASING FLUID

—A high-speed "Worker" that dissolves oil, grease and grime from motors, chassis and running gear. Saves precious minutes on repair jobs and inspections. Safer to use because it leaves no greasy film on floors or in grease pits. Use it, also, to clean tools and equipment.

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Stays IN and ON - won't wash out

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The one best way to restore collapsed pistons to original factory fit.

Every pulled piston should be Koetherized.

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Newark, N. J.

STANDARD & SPECIAL TRUCKS ANY SIZE OR TYPE



AVAILABLE TRUCK COMPANY 2501 Elston Ave., Chicago, Illinois



MODERNIZING SHOP

(CONTINUED FROM PAGE 156)

line, and then re-installed in the truck, if it takes a full charge.

We recently put in a battery rebuilding department with one man to rebuild, check and take care of the batteries. If one cell is unfit for further use we put in a new unit. This way we get the most possible miles of safe service out of each battery, but we promptly junk the elements when they cannot be rebuilt. Every good box is saved. When new elements are needed they can be installed in the old box. The savings are obvious.

We are unable to report any new economies or improvements on gasoline mileage, due to the lower octane ratings. It is gratifying to know, however, that we are maintaining past records even with lower grades of fuel, and on tires, even in the face of higher prices, under our more rigid PM program.

Wide Base Rims

An important step to increase our tire mileage was inaugurated three years ago, namely, to use wide base rims, wider than normally prescribed by the tire manufacturers. For example, we use 34x7, 7:50x20 and 8:25x20 tires on 8-inch wheels and rims instead of the usual 7-inch. Also 9:00x20 and 10:00x20 tires on 9-10-in, rim instead of the usual 8-in.

This over-sizing gives the tire greater air volume, thus increasing its actual carrying capacity 15 to 20 per cent. The wide rims also cause the tire beads to spread farther apart, thus relaxing the tire tread and causing less longitudinal cracking of the rubber and less flexing of the side-

(TURN TO PAGE 159, PLEASE)



KINGBEE

"... pioneers in safety equipment"

lamps . mirrors . reflectors . flares

AMERICAN AUTOMATIC DEVICES CO. Harrison, Throop and Congress Streets CHICAGO, ILLINOIS

AMERICAN BOSCH

AVIATION & AUTOMOTIVE **ELECTRICAL PRODUCTS**

FUEL INJECTION EQUIPMENT

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Conditions

Eliminate Run Down Batteries for Lew Cost Battery Milesge. The new, improved, Valley-Guaranteed (two years) charger connects to the lighting circuit. . is easy and economical to operate . . . Be moving parts. Now it is easy and inexpensive to obtaining battery life by maintaining efficient battery charge Model SG-12 charges 1 to 12 6 volumetries.



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SEE YOUR A.S.F. DEALER ABOUT 5th WHEEL REPAIR PARTS AND ADJUSTMENTS!

A·S·F· 5th Wheel American Steel Foundries Indiana Harbor Works - East Chicago, Ind.



OSHKOSH 4-WHEEL

For twenty-four years Oshkosh has been building 4-Wheel Drive trucks for all kinds of jobs where the going was tough. Their dependability has long been recognized by Federal, State and County Highway Departments. Recently an increasing number of Oshkosh trucks have gone into War service, in and outside of the United States.

Investigate Oshkosh. Write for descriptive bulletin.

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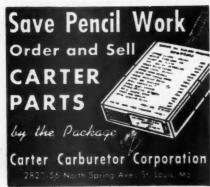
Air Base Construction

"In Service"—At Home and Abroad









MODERNIZING SHOP

(CONTINUED FROM PAGE 158)

walls, such as a hinging action just above the bead.

Tires Checked by Engineers

Determined to conserve tires to the utmost, we recently engaged tire engineers from one of the major tire companies to check our tires periodically, both at the Toledo maintenance shop and at the other service terminals. We derive keen satisfaction from their reports, which show how closely we have held to proper conservation methods. In one inspection of 18 semi-trailer units, only one tire was found in irregular use. Other units recently inspected by them were found in about the same ratio. We are trying to cover the whole fleet once each month by these inspectors, in addition to our regular shop inspection program.

In their reports the tire engineers tell us what to do to correct any irregularities. We pay for this service. All tires are checked every other day at some point-in our main shop, in Toledo or in other service terminals.

In order to get the utmost mileage, we use our recaps mostly in the winter season. We use them on short run units, or on dollies and light (TURN TO PAGE 160, PLEASE)





DE VILBISS

Spray-Painting Equipmentooths—Canopy Exhaust Systems —Exhaust Fans—Air Compressors —Hose and Hose Connections— Oil Guns.

Write for catalog

THE DEVILBISS COMPANY TOLEDO, OHIO

tors or direct sales and service repre-sentatives available everywhere.



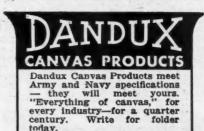
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BOWMAN Plastic LENS?

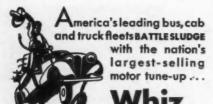
It will surprise you. Bowman Leases are Flexible, Color Fast, Weather Proof, Shat-ter Proof and Economical. Have glass-like transparency—red or amber.

Ask your jobber or order direct.

BOWMAN AUTOMOTIVE PLASTICS CO. 4316. W. 192nd Street, Cleveland, Ohio.



44 WEST ST. * NEW YORK, N. Y



Motor Ry

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LEADER IN MAINTENANCE CHEMICALS





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4340-58 W. Roosevelt Road CHICAGO, ILL., U. S. A.

AUSTIN

THE ACCEPTED STANDARD . . .



A complete line of LANDING GEARS ---HORIZONTAL, VERTICAL and FOLDING TYPES.

Write for complete information on "SAFETY PROPS" and FIFTH WHEELS.

TRAILER EQUIPMENT COMPANY MUSICON

The fighting front for Jobber and Repair Man is in keeping trucks and busses running to win the war.

CHINS UP for 1943

Wohlert LANSING MICHIGAN

There's only One BURN-OUT PROOF DIRECTIONAL SIGNAL SWITCH and we make it! In complete sets of Signal-Stats or as a replacement, swifch, ASK YOUR JOBBER SIGNAL-STAT CORPORATION 68 JAY STREET BROOKLYN, N. Y.

MODERNIZING SHOP

(CONTINUED FROM PAGE 159)

trailers carrying light loads, where there is no braking action. We also use recaps for spares. We do get more extra service out of our recaps on this method, chiefly, we believe, because it makes provision for hidden weaknesses in older carcasses, which are unavoidable in a certain percentage of recapped tires.

To round out our tire inspection program and eliminate every conceivable possibility of delayed action, we applied for and obtained the rating of tire inspection officials for myself and the night foreman. In this way when a truck comes in and needs immediate replacements for emergency runs, the unit need not be held up in its deliveries of important war materials.

Our tire repair department is in the old shop. Here we have a full time tire man in charge to keep inner tubes repaired and for other minor tire services.

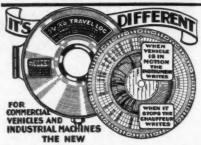
Body Maintenance

We paint our own trucks and trailers in a small building on another lot, across the street from our main shop. The paint shop is small, but we remove all fumes with two ventilating fans, one on each end of the building.

A large room in the old maintenance shop is used for manufacturing and repairing tarpaulins. It is equipped with electric sewing machines. There is also a woodworking department for making body and floor repairs on our trucks and trailers. We have an experienced woodworking man in charge of this department.

We now use two 7/8-in. oak boards for reflooring trailers; the lower one laid lengthwise and the upper one (CONTINUED ON PAGE 161)





"PEKA" TRAVEL LOG

PAUL KNOPF LONG ISLAND CITY, N.Y.

KEEP YOUR VEHICLES MOVING ECONOMICALLY

with

HALL

VALVE SERVICING EQUIPMENT

Ask Your Jobber or write
THE HALL MFG. CO.
TOLEDO, OHIO



WORLD BESTOS CORP. Paterson, N. J.

The complete line that completely satisfies



Gasket craftsmen since 1906
The Fitzgerald Mfg. Company
Torrington, Conn.

The Cream of Truck Service Keeps Trucks on the Job!



Count on International Service
INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago, Illinois

INTERNATIONAL TRUCKS





Call on Heil's

nation-wide distributor organization for specialized service on dump bodies and tanks.

THE Decalcomania that is . . . APPEARANCE FIRST in **ECONOMY** DURABILITY

Permalux "KOLORFILM"

PERMALUX "KOLORFILM" decais offer greater durability and economy in application and maintenance. Completely synchronous with modern truck finish, they last longer...look better!

IT'S MADE OF DEPONT "DULUX" Write TODAY for details.

THE PERMALUX COMPANY 900-10 West Lake St...



JONES PORTABLE TACHOMETER



world's largest The world's largest operators of commercial vehicles use Jones Portable Tachometers to check engine speeds for tune-ups, and setting governors, etc. Here are a few: Standard Oil Co., of La., N. J., N. Y., Shell Petroleum Co., Atlantic Refining Company, Tidewater Oil Company, Keeshin Motor Express, Mack Trucks, Brockway, U. S. Navy. The

Direct, instantaneous reading JONES-MOTROLA-STAMFORD, CONN 432 FAIRFIELD AVENUE



MODERNIZING SHOP

(CONTINUED FROM PAGE 160)

crosswise, making a laminated construction of greater durability than the heavier, single floor type. Because steel is scarce, we now use shiplap instead of plywood and 18 gage steel for our body sides as formerly used.

Metal Spraying

We made use of metal spraying increasingly during 1942 with most gratifying results. It is applicable to many parts of the truck units, but we used it mostly to build up worn or scored driving shafts, axles, crankshafts, wheel hubs and brake hous-We found its use especially profitable on items that cannot be replaced or which involve costly delays.

Metal spraying costs range from 30 to 80 per cent of the price of new parts, depending on the size and nature of the units. However, the big thing is we can get prompt delivery and thus get our trucks back on duty with little delay.

We farm this work out to a local jobber, and we turn them down to exact specifications in our own shop. On hard working parts like crankshafts, they use 1.20 carbon steel, making a more durable part.

To illustrate the advantages and savings in time and money, it often happens that a crankshaft on a small engine may become worn so badly on the bearing end that it develops oil leaks that can't be stopped. Our jobber will build this up for us for about \$6. A new one will cost \$55 up, according to size and model. Should the entire shaft require metal spraying and machining the cost will run more than the replacement, but still it pays when a replacement is unavailable.

(Please resume your reading on P. 55)

DIESEL OIL GASOLINE BUTANE ALL LIQUID OR GASEOUS FUELS Fleets "PAY OFF" where they are needed; on the road. That's where Genuine Timken Bearings keep them . .

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO



MILWAUKEE DUSTLESS 526 N. 22nd St.

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THE GREATEST NAME IN ELECTRICITY





MECHANITE RESEARCH INSTITUTE, NEW ROCHELLE, N. Y.

CUT WEAR MOTOR OIL

Advertisers' Index

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A.C. Spark Flug Div. General Mo-	Federal Motor Truck Co 73	Motors Corp 142
tors Corp 91	Federal Products Corp 152	Parish Pressed Steel Co 81
Ahlberg Bearing Co	Fisk Tires Div. of U. S. Rubber	Pedrick Piston Rings 12
Aircraft & Diesel Equipment Corp. 152		
Airtex Automotive Corp 95	Со 143	Pennsylvania Rubber Co
Albertson & Co., Inc	Fitzgerald Mfg. Co 160	Perfect Circle Co., The 7
Almetal Universal Joint Co., The 157	Four Wheel Drive Auto Co.	Permalux Company, The 161
Aluminum Company of America	Back Cover	Permatex Co., Inc 3
3rd Cover	Fram Corporation 105	Purolator Products, Inc 158
American Automatic Devices Co., 158	Frink, Inc., Carl H 154	0
American Bosch Corp 158	Fuller Mfg. Co 141	Quaker State Oil Refining Corp 132
	Fulton Co., The 154	Ramsey Accessories Mfg. Corp 8
American Brakeblok Div. of The	Fullon Co., The	Raybestos Div., Raybestos-Man-
American Brake Shoe & Foundry	Gotke Corn 156	
Co 85	Gatke Corp	hattan, Inc 15
American Chain & Cable Co., Inc.	General Detroit Corp 151	Refill Filter Co 159
(Automotive and Aircraft Divi-	General Electric Co	Reo Motors, IncFront Cover
sion) 22	General Tire & Ruber Co24-25	Roller Bearing Co. of Amer 158
American Hammered Piston Ring	Globe Hoist Co 90	
	Globe-Union, Inc 154	S K F Industries, Inc 18
Co., Koppers Div 158	Goodrich Co., The, B. F 164	Salisbury Axle Co 81
American Safety Tank Co 154	Grico Two Axle Drive Co 154	Schrader's Sons, A., Div. Scovill
American Steel Foundries 158		Mfg. Co 106
Anthony Co., Inc 84	Grizzly Mfg. Co 110	Sealed Power Corp 75
Arkansas Fuel Oil Company 139	Hall Mfg. Co., The 160	Seiberling Rubber Co
Armstrong Cork Co 28	Hansen Mfg. Co., A. L 74	
Associated Tire Lines 19		Service Recorder Co., The 80
Austin Trailer Equipment Co 160	Haskelite Mfg. Corp 155	Shaler Company, The 121
	Hastings Mfg. Co 83	Shuler Axle Co., Inc 79
Autocar Company	Heil Co., The	Signal-Stat Corp 160
Autopulse Corp 158	Hein-Werner Motor Parts Corp 119	Sinclair Refining Co
Available Truck Co 158	Holland Hitch Co 158	Snap-On Tools Corp 159
B-11- Wi-4-1 G	Hollingshead Corp., R. M 160	Socony-Vacuum Oil Co20-21
Baldor Electric Company 156	Hoof Products Co	
Barrett Equipment Co 78	ALUCA ALUCANOM CONTINUES AND	Spicer Mfg. Corp
Bendix Aviation Corp92-124	Imperial Brass Mfg. Co., The 98	Standard Oil Co. (Indiana) 10
Eclipse Machine Div 124	International Chain & Mfg. Co 156	Stanley Co., Inc., John T 157
Zenith Carburetor Div 92	International Harvester Co 160	Sterling Motors Corp 155
Bendix-Westinghouse Automotive	International Harvester Co 100	Stewart-Warner Corp 131
	Johns-Manville Corp 149	Studebaker Corp 27
Air Brake Co 136	Jones-Motrola Sales Co 161	
Blackhawk Mfg. Co 159	Jones-Motroia Bates Co	Testing Apparatuses, Inc 157
Blood Brothers Machine Co 100	K-D Lamp Co., The 156	Texas Co., The 4-5
Bowers Battery & Spark Plug Co. 123	K-D Mfg. Co 116	Thermoid Co 97
Bowman Automotive Plastics Co., 159	Kathanode Corp 155	Thompson Products, Inc 103
Bridgeport Fabrics, Inc 152		Thornton Tandem Co 14
Brown Lipe Gear Co 81	Kellogg Div., American Brake	Timken-Detroit Axle Co., The 11
Buell Manufacturing Co 156	Shoe & Foundry Co 120	Timken Roller Bearing Co 161
Duch manufacturing Co	Kerking & Co., Inc 94	Tobin-Arp Mfg. Co 152
Carter Carburetor Corp 159	Key Co 150	Toledo Steel Products Co 129
	King-Seeley Corp 2	
Casite Corp., The 86	Kingham Trailer Co., Inc 154	Trailer Co. of Amer 134
Champ-Items, Inc 122	Kinnear Mfg. Co., The 154	Trucktor Corp., The 128
Champion Spark Plug Co 9	Knopf, Paul 160	Tyson Bearing Corp 68
Chicago Rivet & Machine Co 76	Koppers Co., American Hammered	U. S. Asbestos Div. Raybestos-
Cities Service Oil Company 139	Piston Ring Co	Manhattan, Inc 29
Cleveland Pneumatic Tool Co., The 140	Fiston King Co 196	
Cooper Corporation, The 108	Lindsay & Lindsay 63	U. S. Rubber Co 117
Crescent Co 153	Lipe-Rollway Corp 154	Valley Electric Corp 158
Cummins Engine Co 1		Valvoline Oil Co
Curtis Pneumatic Machinery Div.,	Lisle Corp 112	Van de Horst Corp. of Amer 101
	Lynch Manufacturing Corp 109	
Curtis Mfg. Co 150	McCreary Tire & Rubber Co 113	Victor Mfg. & Gasket Co 158
Daniels, Inc., C. R	Mack Trucks, Inc 65	W G B Oil Clarifier, Inc 160
	Macmillan Petroleum Corp 145	Wagner Electric Corp34-126
	Maremont Automotive Products	Walker Mfg. Co. of Wisconsin 144
Dayton Rubber Mfg. Co., The 99		Tribution in 177
Dayton Steel Foundry Co., The 31.	Inc.	Walter Motor Truck Co 147
DeLuxe Products Corp 156	Inc 155	Walter Motor Truck Co 147
	Marmon-Herrington Co., Inc 32	Ward LaFrance Div., Great Amer-
DeVilbiss Co., The 159	Marmon-Herrington Co., Inc 32 Marquette Mfg. Co., Inc 114	Ward LaFrance Div., Great American Ind., Inc
DeVilbiss Co., The 159	Marmon-Herrington Co., Inc 32 Marquette Mfg. Co., Inc 114 Meehanite Research Institute 161	Ward LaFrance Div., Great Amer-
DeVilbiss Co., The	Marmon-Herrington Co., Inc 32 Marquette Mfg. Co., Inc 114 Meehanite Research Institute 161 Meyercord Co., The	Ward LaFrance Div., Great American Ind., Inc
DeVilbiss Co., The	Marmon-Herrington Co., Inc 32 Marquette Mfg. Co., Inc 114 Meehanite Research Institute 161	Ward LaFrance Div., Great American Ind., Inc
DeVilbiss Co., The	Marmon-Herrington Co., Inc 32 Marquette Mfg. Co., Inc 114 Meehanite Research Institute 161 Meyercord Co., The	Ward LaFrance Div., Great American Ind., Inc
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The 151 Michiana Products Corp. 96	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts. 157 Miller Rubber Co., Div. B. F.	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. Goodrich Co. 19	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. Goodrich Co. 19 Milwaukee Dustless Brush Co. 161	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 6 Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monmouth Products Co. 159	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts. 157 Miller Rubber Co., Div. B. F. Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monmouth Products Co. 159 Monroe Auto Equipment Co. 125	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 6 Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monmouth Products Co. 159	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2 Wilkening Mfg. Co. 12
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts. 157 Miller Rubber Co., Div. B. F. Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monmouth Products Co. 159 Monroe Auto Equipment Co. 125 Morse Chain Co. 146	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monmouth Products Co. 125 Morse Chain Co. 146 National Automotive Parts Asso-	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2 Wilkening Mfg. Co. 12
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DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midhand Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 600drich Co. 19 Milwaukee Dustless Brush Co. 161 Monnouth Products Co. 159 Monroe Auto Equipment Co. 125 Morse Chain Co. 146 National Automotive Parts Association 156 National Refining Co., The. 111	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2 Wilkening Mfg. Co. 12 Willard Storage Battery Co. 16 Wiry Joe 153 Wittek Mfg. Co. 69
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midhand Steel Products Co. 71 Mid-Western Auto Parts. 157 Miller Rubber Co., Div. B. F. Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monroe Auto Equipment Co. 125 Morse Chain Co. 146 National Automotive Parts Association 156 National Refning Co., The. 111 New Britain Machine Co. 93	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilkening Mfg. Co. 12 Willard Storage Battery Co. 16 Wiry Joe 153 Wittek Mfg. Co. 69 Wohlert Corp. 160
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midhand Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 600drich Co. 19 Milwaukee Dustless Brush Co. 161 Monnouth Products Co. 159 Monroe Auto Equipment Co. 125 Morse Chain Co. 146 National Automotive Parts Association 156 National Refining Co., The. 111	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2 Wilkening Mfg. Co. 12 Willard Storage Battery Co. 16 Wiry Joe 153 Wittek Mfg. Co. 69 Wohlert Corp. 160 Wolf's Head Oil Refining Co. 127
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midhand Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 6 Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monnouth Products Co. 159 Monroe Auto Equipment Co. 125 Morse Chain Co. 146 National Automotive Parts Association 156 National Refining Co., The. 111 New Britain Machine Co. 93 Niehoff & Co., C. E. 87	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 118 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilkening Mfg. Co. 12 Willard Storage Battery Co. 16 Wiry Joe 153 Wittek Mfg. Co. 69 Wohlert Corp. 160
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 19 Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monmouth Products Co. 159 Monroe Auto Equipment Co. 125 Morse Chain Co. 146 National Automotive Parts Association 156 National Refining Co., The. 111 New Britain Machine Co. 93 Niehoff & Co., C. E. 87 Oakite Products, Inc. 153	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 18 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2 Wilkening Mfg. Co. 12 Willard Storage Battery Co. 16 Wiry Joe 153 Wittek Mfg. Co. 69 Wohlert Corp. 160 Wolf's Head Oil Refining Co. 127 World Bestos Corp. 160
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 6 Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monmouth Products Co. 159 Monroe Auto Equipment Co. 125 Morse Chain Co. 146 National Automotive Parts Association 156 National Refining Co., The. 111 New Britain Machine Co. 93 Niehoff & Co., C. E. 87 Oakite Products, Inc. 153 Ohio Piston Company. 26	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 18 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2 Wilkening Mfg. Co. 12 Willard Storage Battery Co. 16 Wiry Joe 153 Wohlert Corp. 69 Wohlert Corp. 160 Wolf's Head Oil Refining Co. 127 World Bestos Corp. 160 Young Windows 156
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midhand Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 156 Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monnouth Products Co. 159 Monroe Auto Equipment Co. 125 Morse Chain Co. 146 National Automotive Parts Association 156 National Refining Co., The. 111 New Britain Machine Co. 93 Niehoff & Co., C. E. 87 Oakite Products, Inc. 153 Ohio Piston Company 26 Oshkosh 4-Wheel Drive Sales	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 18 Weaver Manufacturing Co. 88 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2 Willard Storage Battery Co. 16 Wiry Joe 153 Wittek Mfg. Co. 69 Wohlert Corp. 160 Wolf's Head Oil Refining Co. 127 World Bestos Corp. 160 Young Windows 156 Zenith Carburetor Div. Bendix
DeVilbiss Co., The	Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 114 Meehanite Research Institute 161 Meyercord Co., The. 151 Michiana Products Corp. 96 Midland Steel Products Co. 71 Mid-Western Auto Parts 157 Miller Rubber Co., Div. B. F. 6 Goodrich Co. 19 Milwaukee Dustless Brush Co. 161 Monmouth Products Co. 159 Monroe Auto Equipment Co. 125 Morse Chain Co. 146 National Automotive Parts Association 156 National Refining Co., The. 111 New Britain Machine Co. 93 Niehoff & Co., C. E. 87 Oakite Products, Inc. 153 Ohio Piston Company. 26	Ward LaFrance Div., Great American Ind., Inc. 77 Warner Electric Brake Mfg. Co. 163 Waukesha Motor Co. 161 Wausau Motor Parts Co. 161 Weatherhead Co. 18 Weidenhoff, Joseph, Inc. 160 Wellman Co., S. K. 161 White Motor Co. 67 Whitehead Stamping Co. 155 Wilcox-Rich Corp. 2 Wilkening Mfg. Co. 12 Willard Storage Battery Co. 16 Wiry Joe 153 Wohlert Corp. 69 Wohlert Corp. 160 Wolf's Head Oil Refining Co. 127 World Bestos Corp. 160 Young Windows 156